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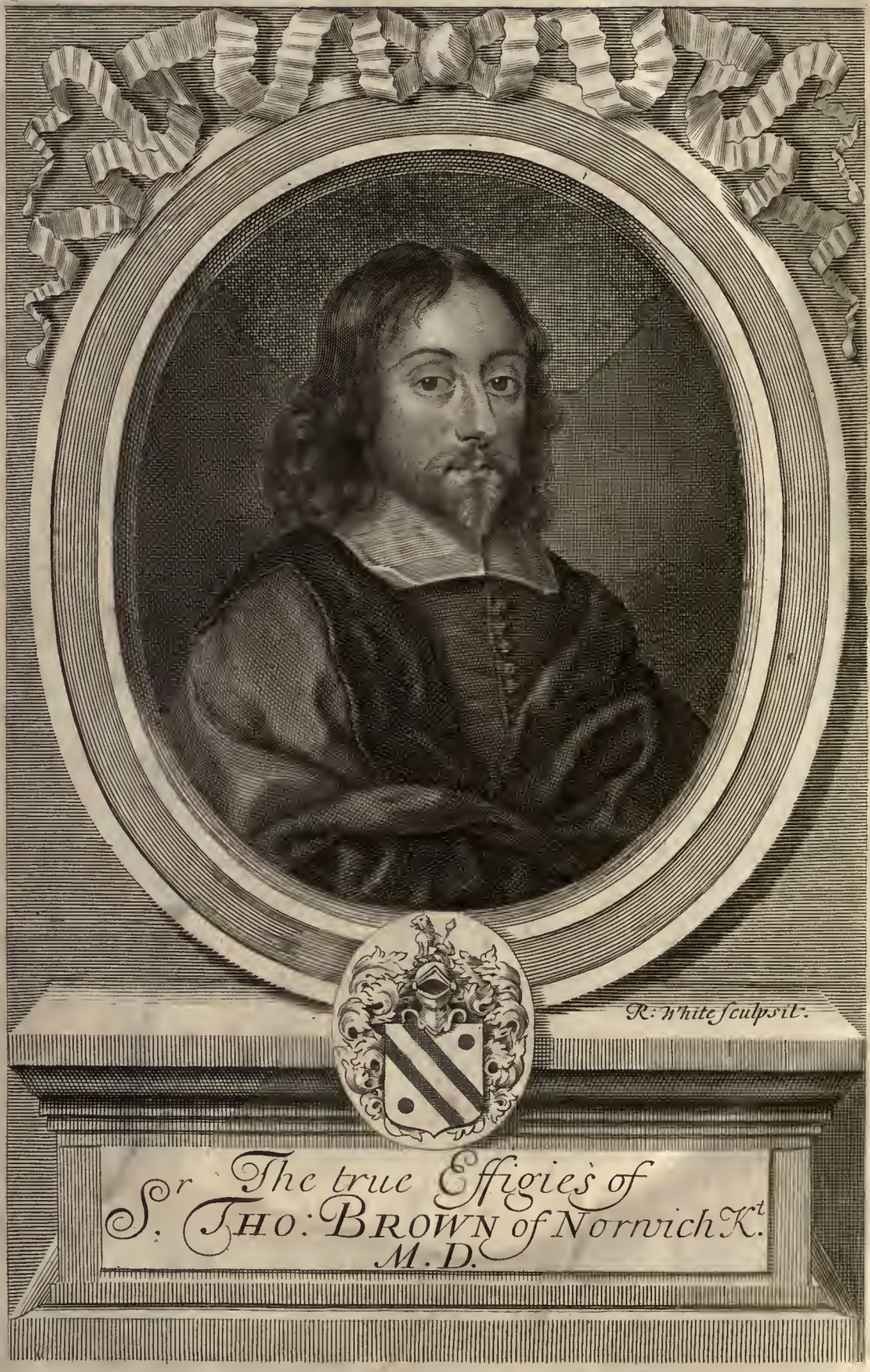
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Sr The true Effigies of
S. THO: BROWN of Norwich Kt.
M. D.

THE WORKS

Of the Learned

Sr Thomas Brown, Kt.

Doctor of Physick, late of *NORWICH.*

CONTAINING

I. Enquiries into Vulgar and Common Errors.

II. *Religio Medici:* With Annotations and Observations upon it.

III. *Hydriotaphia*; or, *Urn-Burial*: Together with *The Garden of* Cyrus.

IV. Certain Miscellany Tracts.

---

with Alphabetical Tables.

LONDON,

Printed for *Tho. Basset, Ric. Chiswell, Tho. Sawbridge, Charles Mearn,* and *Charles Brome.* MDC LXXXVI.

THE WORKS

OF

Sir Thomas Browne, Kt.

Pseudodoxia Epidemica:

OR,

ENQUIRIES

Into very many Received

TENENTS

And commonly presumed

TRUTHS.

By Sir *Thomas Brown* Knight, M. D.

The Seventh and Last Edition,

Corrected and Enlarged by the Author, with many Explanations, Additions and Alterations throughout.

TOGETHER

With many more Marginal Observations, and a Table Alphabetical at the end.

JUL. SCALIG.

Ex Libris colligere quæ prodiderunt Authores longè est periculosissimum; Rerum ipsarum cognitio vera è rebus ipsis est.

LONDON,

Printed for *Richard Chiswell*, and *Thomas Sawbridge.*

M DC LXXXVI.

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Jul. Scaliger.

Ex falsissimis quae probabiliora, ad veritatem sunt proxima, ea sunt electissima.

LONDON

Printed for Richard Chiswell, and Thomas Sawbridge

M DC LXXXV.

TO THE READER.

WOULD Truth dispense, we could be content, with *Plato*, that knowledge were but remembrance; that intellectual acquisition were but reminiscential evocation, and new Impressions but the colourishing of old stamps which stood pale in the soul before. For what is worse, knowledge is made by oblivion, and to purchase a clear and warrantable body of Truth, we must forget and part with much we know. Our tender Enquiries taking up Learning at large, and together with true and assured notions, receiving many, wherein our reviewing judgements do find no satisfaction. And therefore in this *Encyclopædie* and Round of Knowledge, like the great and exemplary Wheels of Heaven, we must observe two Circles: that while we are daily carried about, and whirled on by the swing and rapt of the one, we may maintain a natural and proper

courſe, in the ſlow and ſober Wheel of the other. And this we ſhall more readily perform, if we timely ſurvey our knowledge; impartially ſingling out thoſe encroachments, which junior compliance and popular credulity hath admitted. Whereof at preſent we have endeavoured a long and ſerious *Adviſo*; propoſing not only a large and copious Liſt, but from experience and reaſon attempting their deciſions.

And firſt we crave exceeding pardon in the audacity of the Attempt, humbly acknowledging a work of ſuch concernment unto truth, and difficulty in it ſelf, did well deſerve the conjunction of many heads. And ſurely more advantageous had it been unto Truth, to have fallen into the endeavours of ſome co-operating advancers, that might have performed it to the life, and added authority thereto; which the privacy of our condition, and unequal abilities cannot expect. Whereby notwithſtanding we have not been diverted; nor have our ſolitary attempts been ſo diſcouraged, as to deſpair the favourable look of Learning upon our ſingle and unſupported endeavours.

Nor have we let fall our Pen, upon diſcouragement of Contradiction, Unbelief and Difficulty of diſſwaſion from radicated beliefs, and points of high preſcription, although we are very ſenſible, how hardly teaching years do learn, what roots old age contracteth unto errors, and how ſuch as are but Acorns in our younger brows, grow Oaks in our elder heads,

and

and become inflexible unto the powerfulleſt arm of reaſon. Although we have alſo beheld, what cold requitals others have found in their ſeveral redemptions of Truth; and how their ingenuous Enquiries have been diſmiſſed with cenſure, and obloquy of ſingularities.

Some conſideration we hope from the courſe of our Profeſſion, which though it leadeth us into many truths that paſs undiſcerned by others, yet doth it diſturb their Communications, and much interrupt the office of our Pens in their well intended Tranſmiſſions. And therefore ſurely in this work attempts will exceed performances; it being compoſed by ſnatches of time, as medical vacations, and the fruitleſs importunity of *Uroſcopy* * would permit us. And therefore alſo, perhaps it hath not found that regular and conſtant ſtyle, thoſe infallible experiments, and thoſe aſſured determinations, which the ſubject ſometime requireth, and might be expected from others, whoſe quiet doors and unmoleſted hours afford no ſuch diſtractions. Although whoever ſhall indifferently perpend the exceeding difficulty, which either the obſcurity of the ſubject, or unavoidable paradoxology muſt often put upon the Attemptor, he will eaſily diſcern, a work of this nature is not to be performed upon one legg; and ſhould ſmell of oyl, if duly and deſervedly handled.

* Inſpection of Urines.

Our firſt intentions, conſidering the common intereſt of Truth, reſolved to propoſe it unto the *Latin* Republique and equal Judges of *Europe*,

Europe, but owing in the first place this service unto our Countrey, and therein especially unto its ingenuous Gentry, we have declared our self in a language best conceiv'd. Although I confess the quality of the Subject will sometimes carry us into expressions beyond meer *English* apprehensions. And indeed, if Elegancy still proceedeth, and *English* Pens maintain that stream, we have of late observed to flow from many; we shall within few years be fain to learn *Latin* to understand *English*, and a work will prove of equal facility in either. Nor have we addressed our Pen or Style unto the people, (whom Books do not redress, and are this way incapable of reduction) but unto the knowing and leading part of Learning. As well understanding (at least probably hoping) except they be watered from higher Regions, and fructifying Meteors of Knowledge; these Weeds must lose their alimental sap, and wither of themselves. Whose conserving influence, could our endeavours prevent; we should trust the rest unto the Sythe of *Time*, and hopeful dominion of Truth.

We hope it will not be unconsidered, that we find no open tract, or constant manuduction in this Labyrinth; but are oft-times fain to wander in the *America* and untravelled parts of Truth. For though not many years past, Dr. *Primrose* hath made a learned Discourse of Vulgar Errors in Physick, yet have we discussed but two or three thereof. *Scipio Mercurii* hath also left an excellent Tract in *Italian*, concerning

Popular

Popular Errors; but confining himſelf only unto thoſe in Phyſick, he hath little conduced unto the generality of our Doctrine. *Laurentius Joubertus*, by the ſame Title led our expectation into thoughts of great relief; whereby notwithſtanding we reaped no advantage; it anſwering ſcarce at all the promiſe of the Inſcription. Nor perhaps (if it were yet extant) ſhould we find any farther Aſſiſtance from that ancient piece of *Andreas*, pretending the ſame Title. And therefore we are often conſtrained to ſtand alone againſt the ſtrength of Opinion, and to meet the *Goliah* and Gyant of Authority, with contemptible Pibbles, and feeble Arguments, drawn from the ſcrip and ſlender ſtock of our ſelves. Nor have we indeed ſcarce named any Author whoſe Name we do not honour; and if detraction could invite us, diſcretion ſurely would contain us from any derogatory intention, where higheſt Pens and friendlieſt Eloquence muſt fail in commendation.

περὶ τῶν ψευδῶς πεπιστευμένων, Athenæi *lib.* 7.

And therefore alſo we cannot but hope the equitable conſiderations, and candour of reaſonable minds. We cannot expect the frown of *Theology* herein; nor can they which behold the preſent ſtate of things, and controverſie of Points ſo long received in Divinity, condemn our ſober Enquiries in the doubtful appertinancies of Arts, and Receptaries of Philoſophy. Surely Philologers and Critical Diſcourſers, who look beyond the ſhell and obvious exteriours of things, will not be angry with our narrower explorations. And we cannot doubt, our Brothers in Phyſick

(whoſe

(whoſe knowledge in Naturals will lead them into a nearer apprehenſion of many things delivered) will friendly accept, if not countenance our endeavours. Nor can we conceive it may be unwelcome unto thoſe honoured Worthies, who endeavour the advancement of Learning: as being likely to find a clearer progreſſion, when ſo many rubs are levelled, and many untruths taken off, which paſſing as Principles with common beliefs, diſturb the tranquillity of Axioms, which otherwiſe might be raiſed. And wiſe men cannot but know, that Arts and Learning want this expurgation: and if the courſe of truth be permitted unto its ſelf; like that of time and uncorrected computations, it cannot eſcape many errors, which duration ſtill enlargeth.

Laſtly, We are not Magiſterial in Opinions, nor have we Dictator-like obtruded our conceptions; but in the humility of Enquiries or Diſquiſitions, have only propoſed them unto more ocular diſcerners. And therefore Opinions are free, and open it is for any to think or declare the contrary. And we ſhall ſo far encourage contradiction, as to promiſe no diſturbance, or re-oppoſe any Pen, that ſhall fallaciouſly or captiouſly refute us; that ſhall only lay hold of our Lapſes, ſingle out Digreſſions, Corollaries, or Ornamental Conceptions, to evidence his own in as indifferent truths. And ſhall only take notice of ſuch, whoſe experimental and judicious knowledge ſhall ſolemnly look upon it; not only to deſtroy of ours, but to eſtabliſh of his own; not to traduce or extenuate, but to explain and

dilucidate,

dilucidate, to add and ampliate, according to the laudable cuſtom of the Ancients in their ſober promotions of Learning. Unto whom notwithſtanding, we ſhall not contentiouſly rejoyn, or only to juſtifie our own, but to applaud or confirm his maturer aſſertions; and ſhall confer what is in us unto his Name and Honour; Ready to be ſwallowed in any worthy Enlarger: as having acquired our end, if any way, or under any name we may obtain a work, ſo much deſired, and yet deſiderated of Truth.

Thomas Brown.

The Postscript.

Readers,

TO inform you of the Advantages of the present Impression, and disabuse your expectations of any future Enlargements; these are to advertise you, that this Edition comes forth with very many Explanations, Additions, and Alterations throughout, besides that of one entire Chapter: And now this Work is compleat and perfect, expect no further Additions.

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THE

THE FIRST BOOK OR GENERAL PART.

CHAP. I.

Of the Cauſes of Common Errors.

THE Firſt and Father-cauſe of common Error, is, The common infirmity of Humane Nature; of whoſe deceptible condition, although perhaps there ſhould not need any other eviction, than the frequent Errors we ſhall our ſelves commit, even in the expreſs declarement hereof: yet ſhall we illuſtrate the ſame from more infallible Conſtitutions, and perſons preſumed as far from us in condition, as time, that is, our firſt and ingenerated fore-fathers. From whom as we derive our Being, and the ſeveral wounds of conſtitution; ſo, may we in ſome manner excuſe our infirmities in the depravity of thoſe parts, whoſe Traductions were pure in them, and their Originals but once removed from God. Who notwithſtanding (if poſterity may take leave to judge of the fact, as they are aſſured to ſuffer in the puniſhment) were groſly deceived, in their perfection; and ſo weakly deluded in the clarity of their underſtanding, that it hath left no ſmall obſcurity in ours, How error ſhould gain upon them. The Introduction.

For firſt, They were deceived by Satan; and that not in an inviſible inſinuation, but an open and diſcoverable apparition; that is, in the form of a Serpent; whereby although there were many occaſions of ſuſpition, and ſuch as could not eaſily eſcape a weaker circumſpection; yet did the unwary apprehenſion of *Eve* take no advantage thereof. It hath therefore ſeemed ſtrange unto ſome, ſhe ſhould be deluded by a Serpent, or ſubject her reaſon to a Beaſt, which God had ſubjected unto hers. It hath empuzzled the enquiries of others to apprehend, and enforced them unto ſtrange conceptions, Matter of great diſpute, how our firſt Parents could be ſo deceived.

to make out, how without fear or doubt ſhe could diſcourſe with ſuch a creature, or hear a Serpent ſpeak, without ſuſpition of Impoſture. The wits of others have been ſo bold, as to accuſe her ſimplicity, in receiving his Temptation ſo coldly; and when ſuch ſpecious effects of the Fruit were promiſed, as to make them like Gods; not to deſire, at leaſt not to wonder he purſued not that benefit himſelf. And had it been their own caſe, would perhaps have replyed, If the taſte of this Fruit maketh the eaters like *Gods*, why remaineſt thou a Beaſt? If it maketh us but *like Gods*, we are ſo already. If thereby our eyes ſhall be opened hereafter, they are at preſent quick enough, to diſcover thy deceit; and we deſire them no opener, to behold our own ſhame. If to know good and evil be our advantage, although we have Free-will unto both, we deſire to perform but one: We know 'tis good to obey the commandment of God, but evil if we tranſgreſs it.

They were deceived by one another, and in the greateſt diſadvantage of Deluſion, that is, the ſtronger by the weaker: For *Eve* preſented the Fruit, and *Adam* received it from her. Thus the *Serpent* was cunning enough, to begin the deceit in the weaker; and the weaker of ſtrength, ſufficient to conſummate the fraud in the ſtronger. Art and fallacy was uſed unto her; a naked offer proved ſufficient to him: So his ſuperſtruction was his Ruine, and the fertility of his Sleep an iſſue of Death unto him. And although the condition of Sex, and poſteriority of Creation, might ſomewhat extenuate the Error of the Woman; yet was it very ſtrange and inexcuſable in the Man; eſpecially, if as ſome affirm, he was the wiſeſt of all men ſince; or if, as others have conceived, he was not ignorant of the Fall of the Angels, and had thereby Example and Puniſhment to deterr him.

Adam ſuppoſed by ſome to have been the wiſeſt man that ever was.

They were deceived from themſelves, and their own apprehenſions; for *Eve* either miſtook, or traduced the Commandment of God. *Of every Tree of the Garden thou maiſt freely eat, but of the Tree of knowledge of good and evil thou ſhalt not eat: for in the day thou eateſt thereof, thou ſhalt ſurely dye.* Now *Eve* upon the queſtion of the *Serpent*, returned the Precept in different terms: *You ſhall not eat of it, neither ſhall you touch it, leſt perhaps you dye.* In which delivery, there were no leſs than two miſtakes, or rather additional mendacities: for the Commandment forbad not the touch of the Fruit; and poſitively ſaid, *Ye ſhall ſurely dye*: but ſhe extenuating, replyed, *ne forte moriamini, leſt perhaps ye dye.* For ſo in the Vulgar Tranſlation it runneth, and ſo it is expreſſed in the *Thargum* or Paraphraſe of *Jonathan*. And therefore although it be ſaid, and that very truly, *that the Devil was a lyer from the beginning*, yet was the Woman herein the firſt expreſs beginner; and falſified twice, before the reply of *Satan*. And therefore alſo, to ſpeak ſtrictly, the ſin of the Fruit was not the firſt Offence: They firſt tranſgreſſed the Rule of their own Reaſon; and after, the Commandment of God.

Adam and *Eve* how they fell.

They were deceived through the Conduct of their Senſes, and by Temptations from the Object it ſelf; whereby although their Intellectuals had not failed in the Theory of truth, yet did the inſervient and brutal Faculties controll the ſuggeſtion of Reaſon: Pleaſure and Profit already overſwaying the inſtructions, of Honeſty, and Senſuality perturbing the reaſonable commands of Vertue. For ſo it is delivered in the Text; That when the Woman ſaw, *that the Tree was good for food*, and *that it was pleaſant unto the eye*, and *a Tree to be deſired to make one wiſe, ſhe took of the fruit thereof and did eat.* Now hereby it appeareth, that *Eve*, before the Fall, was by the ſame and beaten way of allurements inveigled, whereby her poſterity hath been deluded ever ſince; that is, thoſe three delivered by S. *John*, *The luſt of the fleſh, the luſt of the eye, and the pride of life*: Where indeed they ſeemed as weakly to fail, as their debilitated poſterity, ever after. Whereof notwithſtanding, ſome in their imperfection, have reſiſted more powerful temptations, and in many moralities condemned the facility of their ſeductions.

Adam whence (probably) induced to eat.

Again, they might, for ought we know, be ſtill deceived in the unbelief of their Mortality, even after they had eat of the Fruit: For, *Eve* obſerving no immediate execution of the Curſe, ſhe delivered the Fruit unto *Adam*: who, after the taſte thereof, perceiving himſelf ſtill to live, might yet remain in doubt,

doubt, whether he had incurred Death; which perhaps he did not indubitably believe, until he was after convicted in the visible example of *Abel*. For he that would not believe the Menace of God at first, it may be doubted whether, before an ocular example, he believed the Curse at last. And therefore they are not without all reason, who have disputed the Fact of *Cain*: that is, although he purposed to do mischief, whether he intended to kill his Brother; or designed that, whereof he had not beheld an example in his own kind. There might be somewhat in it, that he would not have done, or desired undone, when he brake forth as desperately, as before he had done uncivilly, *My iniquity is greater than can be forgiven me.*

Whether *Cain* intended to kill *Abel*.

Some niceties I confess there are which extenuate, but many more that aggravate this Delusion; which exceeding the bounds of this Discourse, and perhaps our Satisfaction, we shall at present pass over. And therefore whether the Sin of our First Parents were the greatest of any since; whether the transgression of *Eve* seducing, did not exceed that of *Adam* seduced; or whether the resistibility of his Reason, did not equivalence the facility of her Seduction, we shall refer it to the *Schoolman*; Whether there was not in *Eve* as great injustice in deceiving her Husband, as imprudence in being deceived her self; especially, if fore-tasting the Fruit, her eyes were opened before his, and she knew the effect of it, before he tasted of it; we leave it unto the *Moralist*. Whether the whole relation be not Allegorical, that is, whether the temptation of the Man by the Woman, be not the seduction of the rational and higher parts by the inferiour and feminine faculties; or whether the Tree in the midst of the Garden, were not that part in the Center of the body, in which was afterward the appointment of Circumcision in Males, we leave it unto the *Thalmudist*. Whether there were any Policy in the Devil to tempt them before the Conjunction, or whether the Issue before tentation, might in justice have suffered with those after, we leave it unto the *Lawyer*. Whether *Adam* fore-knew the advent of Christ, or the reparation of his Error by his Saviour; how the execution of the Curse should have been ordered, if, after *Eve* had eaten, *Adam* had yet refused. Whether if they had tasted the Tree of Life, before that of Good and Evil, they had yet suffered the curse of Mortality: or whether the efficacy of the one had not over-powered the penalty of the other, we leave it unto GOD. For he alone can truly determine these, and all things else; Who as he hath proposed the World unto our disputation, so hath he reserved many things unto his own resolution; whose determination we cannot hope from flesh, but must with reverence suspend unto that great Day, whose justice shall either condemn our curiosities, or resolve our disquisitions.

The *Thalmudist*'s Allegories upon the History of *Adam* and *Eve*'s Fall.

Lastly, Man was not only deceivable in his Integrity, but the Angels of Light in all their Clarity. He that said, He would be like the Highest, did Err, if in some way he conceived himself so already: but in attempting so high an effect from himself, he mis-understood the nature of God, and held a false apprehension of his own; whereby vainly attempting not only insolencies, but impossibilities, he deceived himself as low as Hell. In brief, there is nothing infallible but GOD, who cannot possibly Err. For things are really true, as they correspond unto His conception; and have so much verity, as they hold of conformity unto that Intellect, in whose *Idea* they had their first determinations. And therefore being the Rule, he cannot be Irregular; nor, being Truth it self, conceivably admit the impossible society of Error.

CHAP. II.

A further Illuſtration of the ſame.

BEing thus deluded before the Fall, it is no wonder if their conceptions were deceitful, and could ſcarce ſpeak without an Error after. For, what is very remarkable (and no man that I know hath yet obſerved) in the relations of Scripture before the Flood, there is but one ſpeech delivered by Man, wherein there is not an erroneous conception; and, ſtrictly examined, moſt hainouſly injurious unto truth. The Pen of *Moſes* is brief in the account before the Flood, and the ſpeeches recorded are but ſix. The firſt is that of *Adam*, when upon the expoſtulation of God, he replyed, *I heard thy voice in the Garden, and becauſe I was naked I hid my ſelf.* In which reply, there was included a very groſs Miſtake, and, if with pertinacy maintained, a high and capital Error. For thinking by this retirement to obſcure himſelf from God, he infringed the Omniſciency and eſſential Ubiquity of his Maker. Who as he created all things, ſo is he beyond and in them all, not only in power, as under his ſubjection, or in his preſence, as being in his cognition, but in his very Eſſence, as being the ſoul of their cauſalities, and the eſſential cauſe of their exiſtencies. Certainly, his Poſterity at this diſtance, and after ſo perpetuated an impairment, cannot but condemn the poverty of his conception, that thought to obſcure himſelf from his Creator in the ſhade of the Garden, who had beheld him before in the darkneſs of his Chaos, and the great obſcurity of Nothing; that thought to fly from God, which could not fly himſelf; or imagined that one Tree ſhould conceal his nakedneſs from Gods eye, as another had revealed it unto his own. Thoſe tormented Spirits that wiſh the Mountains to cover them, have fallen upon deſires of minor abſurdity, and choſen wayes of leſs improbable concealment. Though this be alſo as ridiculous unto reaſon, as fruitleſs unto their deſires; for he that laid the foundations of the Earth, cannot be excluded the ſecrecy of the Mountains; nor can there any thing eſcape the perſpicacity of thoſe eyes which were before light, and in whoſe Opticks there is no opacity. This is the conſolation of all good men, unto whom his Ubiquity affordeth continual comfort and ſecurity: And this is the affliction of Hell, unto whom it affordeth deſpair, and remedileſs calamity. For thoſe reſtleſs Spirits that fly the face of the Almighty, being deprived the fruition of his eye, would alſo avoid the extent of his hand; which being impoſſible, their ſufferings are deſperate, and their afflictions without evaſion; until they can get out of *Triſmegiſtus* his Circle, that is, to extend their wings above the Univerſe, and pitch beyond Ubiquity.

The Second is that ſpeech of *Adam* unto God, *The woman whom thou gaveſt me to be with me, ſhe gave me of the Tree, and I did eat.* This indeed was an unſatisfactory reply, and therein was involved a very impious Error, as implying God the Author of Sin, and accuſing his Maker of his tranſgreſſion. As if he had ſaid, If thou hadſt not given me a Woman, I had not been deceived: Thou promiſedſt to make her a help, but ſhe hath proved deſtruction unto me: Had I remained alone, I had not ſinned; but thou gaveſt me a Conſort, and ſo I became ſeduced. This was a bold and open accuſation of God, making the Fountain of Good, the contriver of evil; and the forbidder of the crime, an abettor of the fact prohibited. Surely, his mercy was great, that did not revenge the impeachment of his juſtice; and his goodneſs to be admired, that it refuted not his argument in the puniſhment of his excuſation, and only purſued the firſt tranſgreſſion, without a penalty of this the ſecond.

The

The Third was that of *Eve*, *The Serpent beguiled me, and I did eat.* In which reply, there was not only a very feeble excuſe, but an erroneous tranſlating her own offence upon another; Extenuating her ſin from that which was an aggravation, that is, to excuſe the Fact at all, much more upon the ſuggeſtion of a Beaſt, which was before in the ſtricteſt terms prohibited by her God. For although we now do hope, the mercies of God will conſider our degenerated integrities unto ſome minoration of our offences; yet had not the ſincerity of our firſt Parents ſo colourable expectations, unto whom the Commandment was but ſingle, and their integrities beſt able to reſiſt the motions of its tranſgreſſion. And therefore ſo heinous conceptions have riſen hereof, that ſome have ſeemed more angry there-with, than God himſelf: Being ſo exaſperated with the offence, as to call in queſtion their ſalvation, and to diſpute the eternal puniſhment of their Maker. Aſſuredly with better reaſon may poſterity accuſe them, than they the Serpent, or one another; and the diſpleaſure of the *Pelagians* muſt needs be irreconcilable, who peremptorily maintaining they can fulfil the whole Law, will inſatisfactorily condemn the non-obſervation of one.

The Fourth was that ſpeech of *Cain* upon the demand of God, *Where is thy brother?* and he ſaid, *I know not.* In which Negation, beſide the open impudence, there was implyed a notable Error: for returning a lye unto his Maker, and preſuming in this manner to put off the Searcher of Hearts, he denyed the Omniſciency of God, whereunto there is nothing concealeable. The anſwer of Satan in the caſe of *Job*, had more of truth, wiſdom and reverence than this; *Whence comeſt thou, Satan?* and he ſaid, *From compaſſing of the Earth.* For though an enemy of God, and hater of all Truth, his wiſdom will hardly permit him to falſifie with the Almighty. For well underſtanding the Omniſcience of his nature, he is not ſo ready to deceive himſelf, as to falſifie unto him, whoſe cognition is no way deludable. And therefore when in the tentation of Chriſt he played upon the fallacy; and thought to deceive the Author of Truth, the Method of this proceeding aroſe from the uncertainty of his Divinity; whereof had he remained aſſured, he had continued ſilent; nor would his diſcretion attempt ſo unſucceedable a temptation. And ſo again at the laſt day, when our offences ſhall be drawn into accompt, the ſubtilty of that Inquiſitor ſhall not preſent unto God a bundle of calumnies or confutable accuſations, but will diſcreetly offer up unto his Omniſciency, a true and undenyable liſt of our tranſgreſſions.

The Devil knew not our Saviour to be God when he tempted him.

The Fifth, is another reply of *Cain* upon the denouncement of his curſe, *My iniquity is greater than can be forgiven:* For ſo it is expreſſed in ſome Tranſlations. The aſſertion was not only deſperate, but the conceit erroneous, overthrowing that glorious Attribute of God, his Mercy, and conceiving the ſin of Murder unpardonable. Which how great ſoever, is not above the repentance of man, but far below the mercies of God, and was (as ſome conceive) expiated in that puniſhment he ſuffered temporally for it. There are but two examples of this error in Holy Scripture, and they both for Murder, and both as it were of the ſame perſon; for Chriſt was myſtically ſlain in *Abel*, and therefore *Cain* had ſome influence on his death, as well as *Judas*; but the ſin had a different effect on *Cain*, from that it had on *Judas*; and moſt that ſince have fallen into it. For they like *Judas*, deſire death, and not unfrequently purſue it: *Cain* on the contrary, grew afraid thereof, and obtained a ſecurement from it. Aſſuredly, if his deſpair continued, there was puniſhment enough in life, and Juſtice ſufficient in the mercy of his protection. For the life of the deſperate, equalls the anxieties of death; who in unceſſant inquietudes, but act the life of the damned; and anticipate the deſolations of Hell. 'Tis indeed a ſin in man, but a puniſhment only in Devils; who offend not God, but afflict themſelves, in the appointed deſpair of his mercies. And as to be without hope, is the affliction of the damned; ſo is it the happineſs of the bleſſed: who having all their expectations preſent, are not diſtracted with futurities: So is it alſo their felicity to have no Faith; for enjoying the beatifical viſion, there is nothing unto them inevident; and in the fruition of the object of Faith, they have received the full evacuation of it.

The

Cain, as the Rabbins think was the man slain by *Lamech*, Gen. 4. 23.

The last speech was that of *Lamech*, *I have slain a man to my wound, and a young man to my hurt: If Cain be avenged seven fold, truly Lamech seventy and seven fold.* Now herein there seems to be a very erroneous Illation: from the Indulgence of God unto *Cain*, concluding an immunity unto himself; that is, a regular protection from a single example, and an exemption from punishment in a fact that naturally deserved it. The Error of this offender was contrary to that of *Cain*, whom the *Rabbins* conceive that *Lamech* at this time killed. He despaired in Gods mercy in the same Fact, where this presumed of it; he by a decollation of all hope annihilated his mercy, this by an immoderancy thereof destroyed his Justice. Though the sin were less, the Error was as great: For as it is untrue, that his mercy will not forgive offenders, or his benignity co-operate to their conversions; So is it also of no less falsity to affirm His justice will not exact account of Sinners, or punish such as continue in their transgressions.

Thus may we perceive, how weakly our Fathers did Err before the Flood, how continually, and upon common discourse, they fell upon Errors after; it is therefore no wonder we have been erroneous ever since. And being now at greatest distance from the beginning of Error, are almost lost in its dissemination, whose wayes are boundless, and confess no circumscription.

CHAP. III.

Of the second cause of Popular Errors: the erroneous disposition of the People.

HAving thus declared the infallible nature of Man, even from his first production, we have beheld the general cause of Error. But as for popular Errors, they are more nearly founded upon an erroneous inclination of the people; as being the most deceptable part of Mankind, and ready with open arms to receive the encroachments of Error. Which condition of theirs, although deducible from many Grounds, yet shall we evidence it but from a few, and such as most nearly and undeniably declare their natures.

How unequal discerners of truth they are, and openly exposed unto Error, will first appear from their unqualified intellectuals, unable to umpire the difficulty of its dissentions. For Error, to speak largely, is a false judgement of things, or, an assent unto falsity. Now whether the object whereunto they deliver up their assent, be true or false, they are incompetent Judges.

For the assured truth of things is derived from the principles of knowledge, and causes which determine their verities. Whereof their uncultivated understandings, scarce holding any Theory, they are but bad discerners of verity; and in the numerous track of Error, but casually do hit the point and unity of truth.

Arguments of sensitive quality most prevailing upon vulgar capacities.

Their understanding is so feeble in the discernment of falsities, and averting the Errors of Reason, that it submitteth to the fallacies of sense, and is unable to rectifie the Error of its sensations. Thus the greater part of Mankind having but one eye of Sense and Reason, conceive the Earth far bigger than the Sun, the fixed Stars lesser than the Moon, their figures plain, and their spaces from the Earth equidistant. For thus their Sense informeth them, and herein their Reason cannot rectifie them; and therefore hopelesly continuing in mistakes, they live and dye in their absurdities; passing their dayes in perverted apprehensions and conceptions of the World, derogatory unto God, and the wisdom of the Creation.

Again,

Again, being so illiterate in the point of intellect, and their sense so incorrected, they are farther indisposed ever to attain unto truth; as commonly proceeding in those wayes, which have most reference unto sense, and wherein there lyeth most notable and popular delusion.

For being unable to wield the intellectual arms of reason, they are fain to betake themselves unto wasters, and the blunter weapons of truth: affecting the gross and sensible wayes of Doctrine, and such as will not consist with strict and subtile Reason. Thus unto them a piece of Rhetorick is a sufficient argument of Logick; an Apologue of *Æsop*, beyond a Syllogism in *Barbara*; Parables than Propositions, and Proverbs more powerful than demonstrations. And therefore are they led rather by Example, than Precept; receiving perswasions from visible inducements, before intellectual instructions. And therefore also they judge of humane actions by the event; for being uncapable of operable circumstances, or rightly to judge the prudentiality of affairs, they only gaze upon the visible success, and therefore condemn or cry up the whole progression. And so from this ground in the Lecture of Holy Scripture, their apprehensions are commonly confined unto the literal sense of the Text, from whence have ensued the gross and duller sort of Heresies. For not attaining the deuteroscopy, and second intention of the words, they are fain to omit the Super-consequences, Coherences, Figures, or Tropologies; and are not sometime perswaded by fire beyond their literalities. And therefore also things invisible, but unto intellectual discernments, to humour the grosness of their comprehensions, have been degraded from their proper forms, and God himself dishonoured into manual expressions. And so likewise being unprovided, or unsufficient for higher speculations, they will alwayes betake themselves unto sensible representations, and can hardly be restrained the dulness of Idolatry. A sin or folly not only derogatory unto God but men; overthrowing their Reason, as well as his Divinity. In brief, a reciprocation, or rather an inversion of the Creation, making God one way, as he made us another; that is, after our Image, as he made us after His own. Fable.

Moreover, their Understanding thus weak in it self, and perverted by sensible delusions, is yet farther impaired by the dominion of their appetite; that is, the irrational and brutal part of the soul, which lording it over the soveraign faculty, interrupts the actions of that noble part, and choaks those tender sparks, which *Adam* hath left them of reason. And therefore they do not only swarm with Errors, but vices depending thereon. Thus they commonly affect no man any further than he deserts his reason, or complies with their aberrancies. Hence they embrace not Vertue for it self, but its reward; and the argument from Pleasure or Utility is far more powerful, than that from vertuous Honesty: which *Mahomet* and his Contrivers well understood, when he set out the felicity of his Heaven, by the contentments of flesh, and the delight of sense, slightly passing over the accomplishment of the Soul, and the beatitude of that part which Earth and Visibilities too weakly affect. But the wisdom of our Saviour, and the simplicity of his truth proceeded another way; defying the popular provisions of happiness from sensible expectations; placing his felicity in things removed from sense, and the intellectual enjoyment of God. And therefore the doctrine of the one was never afraid of Universities, or endeavoured the banishment of learning, like the other. And though *Galen* doth sometimes nibble at *Moses*, and, beside the * Apostate Christian, some *Heathens* have questioned his Philosophical part, or treaty of the Creation: Yet is there surely no reasonable *Pagan*, that will not admire the rational and well grounded Precepts of Christ; whose life, as it was conformable unto his Doctrine, so was that unto the highest Rules of Reason; and must therefore flourish in the advancement of Learning, and the perfection of parts best able to comprehend it. * *Julian.*

Again, Their individual imperfections being great, they are moreover enlarged by their aggregation; and being erroneous in their single numbers, once hudled together, they will be Error it self. For being a confusion of Knaves and Fools, and a farraginous concurrence of all conditions, tempers, sexes

sexes and ages; it is but natural if their determinations be monstrous, and many wayes inconsistent with Truth. And therefore wise men have alwayes applauded their own judgement, in the contradiction of that of the People: and their sobereſt adversaries have ever afforded them the stile of fools and mad men: and to speak impartially, their actions have made good these *Epithets*. Had *Oreſtes* been Judge, he would not have acquitted that *Lystrian* rabble of madness, who, upon a visible Miracle, falling into so high a conceit of *Paul* and *Barnabas*, that they termed the one *Jupiter*, the other *Mercurius*; that they brought Oxen and Garlands, and were hardly restrained from sacrificing unto them; did notwithstanding suddenly after fall upon *Paul*, and having stoned him, drew him for dead out of the City. It might have hazarded the sides of *Democritus*, had he been present at that Tumult of *Demetrius*; when the people flocking together in great numbers, some crying one thing, and some another; and the assembly was confused, and the most part knew not wherefore they were come together; notwithstanding, all with one voice for the space of two hours cryed out, Great is *Diana* of the *Ephesians*. It had overcome the patience of *Job*, as it did the meekness of *Moses*, and would surely have mastered any, but the longanimity, and lasting sufferance of God; had they beheld the Mutiny in the Wilderness, when, after ten great Miracles in *Egypt*, and some in the same place, they melted down their stoln Ear-rings into a Calf, and monstrously cryed out; *These are thy Gods*, O Israel, *that brought thee out of the land of* Egypt. It much accuseth the impatience of *Peter*, who could not endure the Staves of the multitude, and is the greatest example of Lenity in our Saviour, when he desired of God forgiveness unto those, who having one day brought him into the City in Triumph, did presently after, act all dishonour upon him, and nothing could be heard, but *Crucifige*, in their Courts. Certainly, he that considereth these things in Gods peculiar people, will easily discern how little of truth there is in the wayes of the Multitude; and though sometimes they are flattered with that *Aphorism*, will hardly believe, The voice of the People to be the voice of God.

Non sani esse hominis, non sanus juret Oreſtes.

Lastly, Being thus divided from truth in themselves, they are yet farther removed by advenient deception. For true it is (and I hope I shall not offend their vulgarities, if I say,) they are daily mocked into Error by subtiler devisors, and have been expresly deluded by all Professions and Ages. Thus the *Priests* of Elder time, have put upon them many incredible conceits, not only deluding their apprehensions with Ariolation, South-saying, and such oblique Idolatries, but winning their credulities unto the literal and down-right adorement of Cats, Lizzards, and Beetles. And thus also in some Christian Churches, wherein is presumed an irreprovable truth, if all be true that is suspected, or half what is related; there have not wanted many strange deceptions, and some thereof are still confessed by the name of Pious Frauds. Thus *Theudas* an Impostor, was able to lead away Four Thousand into the Wilderness; and the Delusions of *Mahomet* almost the fourth part of Mankind. Thus all Heresies, how gross soever, have found a welcome with the people. For thus, many of the *Jews* were wrought into the belief, that *Herod* was the *Messias*; and *David George* of *Leyden*, and *Arden*, were not without a Party amongst the People, who maintained the same opinion of themselves almost in our dayes.

Physicians (many at least that make profession thereof) besides divers less discoverable wayes of fraud, have made them believe, there is the Book of Fate, or the Power of *Aaron*'s Breast-plate, in Urins. And therefore hereunto they have recourse, as unto the Oracle of Life, the great Determinator of Virginity, Conception, Fertility, and the Inscrutable infirmities of the whole Body. For as though there were a seminality in Urine, or that, like the Seed, it carried with it the *Idea* of every part, they foolishly conceive, we visibly behold therein the Anatomy of every particle, and can thereby indigitate their Diseases: And running into any demands, expect from us a sudden resolution in things, whereon the Devil of *Delphos* would demurr: and we know hath taken respite of some days to answer easier questions.

The *Author's* Censure upon Judgement by Urine.

Saltimbancoes,

Saltimbancoes, *Quacksalvers*, and *Charlatans*, deceive them in lower degrees. Were *Æsop* alive, the *Piazza* and *Pont-Neuf* could not but speak their fallacies; mean while there are too many, whose cryes cannot conceal their mischiefs. For their Impostures are full of cruelty, and worse than any other; deluding not only unto pecuniary defraudations, but the irreparable deceit of death.

Places in *Venice* and *Paris*, where Mountebanks play their pranks.

Astrologers, which pretend to be of *Cabala* with the Stars (such I mean as abuse that worthy Enquiry) have not been wanting in their deceptions; who having won their belief unto Principles, whereof they make great doubt themselves, have made them believe, that arbitrary events below, have necessary causes above; whereupon their Credulities assent unto any Prognosticks; and daily swallow the Predictions of men, which, considering the independency of their causes, and contingency in their Events, are only in the prescience of God.

Fortune-tellers, Juglers, Geomancers, and the like incantatory Impostors, though commonly men of inferiour rank, and from whom without Illumination, they can expect no more than from themselves, do daily and professedly delude them. Unto whom (what is deplorable in Men and Christians) too many applying themselves, betwixt jest and earnest, betray the cause of Truth, and insensibly make up the legionary body of Error.

Statists and *Politicians*, unto whom *Ragione di Stato*, is the first Considerable, as though it were their business to deceive the people, as a Maxim, do hold, that Truth is to be concealed from them; unto whom although they reveal the visible design, yet do they commonly conceal the capital intention. And therefore have they ever been the instruments of great designs, yet seldom understood the true intention of any, accomplishing the drifts of wiser heads, as inanimate and ignorant Agents, the general design of the World; who though in some Latitude of sense, and in a natural cognition perform their proper actions, yet do they unknowingly concurr unto higher ends, and blindly advance the great intention of Nature. Now how far they may be kept in ignorance, a great example there is in the people of *Rome*; who never knew the true and proper Name of their own City. For, beside that common appellation received by the Citizens, it had a proper and secret Name concealed from them: *Cujus alterum nomen dicere secretis Ceremoniarum nefas habetur*, saith *Pliny*; lest the Name thereof being discovered unto their enemies, their *Penates* and Patronal God might be called forth by Charms and Incantations. For according unto the Tradition of *Magicians*, the Tutelary Spirits will not remove at common appellations, but at the proper names of things, whereunto they are Protectors.

The people of *Rome*, why never suffered to know the right name of their City.

Thus having been deceived by themselves, and continually deluded by others, they must needs be stuffed with Errors, and even over-run with these inferiour falsities; whereunto whosoever shall resign their Reasons, either from the Root of deceit in themselves, or inability to resist such trivial deceptions from others, although their condition and fortunes may place them many Spheres above the multitude, yet are they still within the line of Vulgarity, and Democratical Enemies of Truth.

CHAP. IV.

Of the nearer and more Immediate Causes of Popular Errors, both in the wiser and common sort, Misapprehension, Fallacy, or false Deduction, Credulity, Supinity, Adherence unto Antiquity, Tradition and Authority.

THE first is a mistake, or a misconception of things, either in their first apprehension, or secondary relations. So *Eve* mistook the Commandment, either from the immediate Injunction of God, or from the secondary Narration of her Husband. So might the Disciples mistake our Saviour, in his answer unto *Peter* concerning the death of *John*, as is delivered *John* 21. Peter *seeing* John, *saith unto* Jesus, *Lord, and what shall this man do?* Jesus *saith, If I will, that he tarry till I come, what is that unto thee? Then went this saying abroad among the brethren, that that Disciple should not dye.* Thus began the conceit and opinion of the *Centaures*: that is, in the mistake of the first beholders, as is declared by *Servius*; when some young *Thessalians* on horse-back were beheld afar off, while their Horses watered, that is, while their heads were depressed, they were conceived by the first Spectators, to be but one Animal: and answerable hereunto, have their Pictures been drawn ever since.

The belief of *Centaures* whence occasioned.

And, as simple mistakes commonly beget fallacies, so men rest not in false apprehensions, without absurd and inconsequent deductions; from fallacious foundations, and misapprehended *mediums*, erecting conclusions no way inferrible from their premisses. Now the fallacies whereby men deceive others, and are deceived themselves, the Ancients have divided into Verbal and Real. Of the Verbal, and such as conclude from mistakes of the Word, although there be no less than six, yet are there but two thereof worthy our notation, and unto which the rest may be referred; that is, the fallacy of Equivocation and Amphibology which conclude from the ambiguity of some one word, or the ambiguous Syntaxis of many put together. From this fallacy arose that calamitous Error of the *Jews*, misapprehending the Prophecies of their *Messias*, and expounding them alwayes unto literal and temporal expectations. By this way many Errors crept in, and perverted the Doctrine of *Pythagoras*, whilst men received his Precepts in a different sense from his intention; converting Metaphors into Proprieties, and receiving as literal expressions, obscure and involved truths. Thus when he enjoyned his Disciples, an abstinence from Beans, many conceived they were with severity debarred the use of that Pulse; which notwithstanding could not be his meaning: for as *Aristoxenus*, who wrote his Life averreth, he delighted much in that kind of food himself. But herein, as *Plutarch* observeth, he had no other intention, than to disswade men from Magistracy, or undertaking the Publick Offices of State: for by Beans was the Magistrate elected in some parts of *Greece*: And after his dayes, we read in *Thucydides*, of the Council of the Bean in *Athens*. The same Word also in Greek doth signifie a Testicle, and hath been thought by some, an Injunction only of Continency, as *Aul. Gellius* hath expounded, and as *Empedocles* may also be interpreted: that is, *Testiculis miseri dextras subducite*; and might be the original intention of *Pythagoras*; as having a notable hint hereof in Beans, from the natural signature of the Venereal Organs of both Sexes. Again, his Injunction is, not to harbour Swallows in our houses: Whose advice notwithstanding we do not contemn, who daily admit and cherish them: For herein a Caution is only implyed, not to entertain ungrateful and thankless persons, which like the Swallow, are no way commodious unto us; but having made use of our habitations, and served their own turns, forsake us. So he commands to deface

Equivocation and Amphibology, how they differ.

Pythagoras his Allegorical Precepts moralized.

πᾶν δεῖλοι κυαμῶν ἀπὸ χεῖρας ἔχεσθε.

face the Print of a Cauldron in the aſhes, after it hath boiled. Which ſtrictly to obſerve, were condemnable Superſtition: But hereby he covertly adviſeth us not to perſevere in anger; but after our Choler hath boiled, to retain no impreſſion thereof. In the like ſenſe are to be received, when he adviſeth his Diſciples to give the right hand but to few, to put no Viands in a Chamber-pot, not to paſs over a Balance, not to take up Fire with a Sword, or piſs againſt the Sun. Which ænigmatical deliveries comprehend uſeful Verities, but being miſtaken by literal Expoſitors at the firſt, they have been miſ-underſtood by moſt ſince, and may be occaſion of Error to Verbal capacities for ever.

This fallacy in the firſt deluſion Satan put upon *Eve*, and his whole tentation might be the ſame continued: ſo when he ſaid, *Ye ſhall not dye*, that was, in his equivocation, ye ſhall not incurr a preſent death, or a deſtruction immediately enſuing your tranſgreſſion. *Your eyes ſhall be opened*; that is, not to the enlargement of your knowledge, but diſcovery of your ſhame and proper confuſion; *You ſhall know good and evil*; that is, you ſhall have knowledge of good, by its privation; but cognizance of evil, by ſenſe and viſible experience. And the ſame fallacy or way of deceit, ſo well ſucceeding in Paradiſe, he continued in his Oracles through all the World. Which had not men more warily underſtood, they might have performed many acts inconſiſtent with his intention. *Brutus* might have made haſte with *Tarquine*, to have kiſſed his own Mother. The *Athenians* might have built them Wooden Walls, or doubled the Altar at *Delphos*.

The Circle of this fallacy is very large; and herein may be compriſed all Ironical miſtakes, for intended expreſſions receiving inverted ſignifications; all deductions from Metaphors, Parables, Allegories, unto real and rigid interpretations. Whereby have riſen, not only popular Errors in Philoſophy, but vulgar and ſenſleſs Hereſies in Divinity; as will be evident unto any that ſhall examine their foundations, as they ſtand related by *Epiphanius*, *Auſtin*, or *Prateolus*. *De hæreſibus*

Other wayes there are of deceit; which conſiſt not in falſe apprehenſion of Words, that is, Verbal expreſſions, or ſentential ſignifications, but fraudulent deductions, or inconſequent illations, from a falſe conception of things. Of theſe extradictionary and real fallacies, *Ariſtotle* and *Logicians* make in number ſix, but we obſerve that men are moſt commonly deceived by four thereof: thoſe are, *Petitio principii*, *A dicto ſecundum quid ad dictum ſimpliciter*, *A non cauſa pro cauſa*; And *fallacia conſequentis*.

The firſt is, *Petitio principii*. Which fallacy is committed, when a queſtion is made a *medium*, or we aſſume a *medium* as granted, whereof we remain as unſatisfied, as of the queſtion. Briefly, where that is aſſumed as a Principle to prove another thing, which is not conceded as true it ſelf. By this fallacy was *Eve* deceived, when ſhe took for granted, the falſe aſſertion of the Devil: *Ye ſhall not ſurely dye*; *for God doth know*, *that in the day ye ſhall eat thereof*, *your eyes ſhall be opened*, *and you ſhall be as Gods*. Which was but a bare affirmation of Satan, without any proof or probable inducement, contrary unto the Command of God, and former belief of her ſelf. And this was the Logick of the *Jews* when they accuſed our *Saviour* unto *Pilate*; who demanding a reaſonable impeachment, or the allegation of ſome crime worthy of Condemnation; they only replyed, *If he had not been worthy of Death*, *we would not have brought Him before thee*. Wherein there was neither accuſation of the perſon, no ſatisfaction of the Judge, who well underſtood, a bare accuſation was no preſumption of guilt, and the clamours of the people, no accuſation at all. The ſame Fallacy is ſometime uſed in the diſpute, between *Job* and his friends, they often taking that for granted, which afterward he diſproveth.

The ſecond is, *A dicto ſecundum quid ad dictum ſimpliciter*, when from that which is but true in a qualified ſenſe, an inconditional and abſolute verity is inferred; transferring the ſpecial conſideration of things unto their general acceptions, or concluding from their ſtrict acception, unto that without all limitation. This fallacy men commit, when they argue from a particular to a general; as when we conclude the vices or qualities of a few, upon a whole

Nation. Or from a part unto the whole. Thus the Devil argued with our Saviour: and by this, he would perſwade Him he might be ſecure, if he caſt himſelf from the Pinnacle: For, ſaid he, it is written, *He ſhall give his Angels charge concerning thee, and in their hands they ſhall bear thee up, leſt at any time thou daſh thy foot againſt a ſtone.* Pſalm 91. But this illation was fallacious, leaving out part of the Text, *He ſhall keep thee in all thy wayes*; that is, in the wayes of righteouſneſs, and not of raſh attempts: ſo he urged a part for the whole, and inferred more in the concluſion, than was contained in the premiſſes. By the ſame fallacy we proceed, when we conclude from the ſign unto the thing ſignified. By this incroachment, Idolatry firſt crept in, men converting the ſymbolical uſe of Idols into their proper Worſhip, and receiving the repreſentation of things, as the ſubſtance and thing it ſelf. So the Statue of *Belus* at firſt erected in his memory, was in after-times adored as a Divinity. And ſo alſo in the Sacrament of the *Euchariſt*, the Bread and Wine which were but the ſignals or viſible ſigns, were made the things ſignified, and worſhipped as the Body of Chriſt. And hereby generally men are deceived that take things ſpoken in ſome Latitude, without any at all. Hereby the *Jews* were deceived concerning the Commandment of the Sabbath, accuſing our Saviour *for healing the ſick*, and his Diſciples *for plucking the ears of Corn upon that day.* And by this deplorable miſtake, they were deceived unto deſtruction, upon the aſſault of *Pompey* the Great, made upon that day; by whoſe ſuperſtitious obſervation they could not defend themſelves, or perform any labour whatever.

The Original of Idolatry.

The *Alcoran* endures neither Wine nor Univerſities.

The third is, *A non cauſa pro cauſa*, when that is pretended for a cauſe which is not, or not in that ſenſe which is inferred. Upon this conſequence the Law of *Mahomet* forbids the uſe of Wine; and his Succeſſors aboliſhed Univerſities. By this alſo many Chriſtians have condemned literature, miſunderſtanding the counſel of S. *Paul*, who adviſeth no further than to beware of Philoſophy. On this Foundation were built the concluſions of Southſayers in their Augurial, and Tripudiary Divinations; collecting preſages from Voice or Food of Birds, and conjoyning Events unto Cauſes of no connection. Hereupon alſo are grounded the groſs miſtakes, in the cure of many Diſeaſes; not only from the laſt Medicine, and ſympathetical Receipts, but Amulets, Charms, and all incantatory applications; deriving effects not only from inconcurring cauſes, but things devoid of all efficiency whatever.

The fourth is, the Fallacy of the Conſequent; which if ſtrictly taken, may be a fallacious illation in reference unto antecedency, or conſequency; as to conclude from the poſition of the Antecedent, to the poſition of the Conſequent; or from the remotion of the Conſequent, to the remotion of the Antecedent. This is uſually committed, when in connexed Propoſitions the Terms adhere contingently. This is frequent in Oratory Illations; and thus the *Phariſees*, becauſe He converſed with Publicans and Sinners, accuſed the Holineſs of Chriſt. But if this Fallacy be largely taken, it is committed in any vicious illation, offending the rules of good conſequence; and ſo it may be very large, and comprehend all falſe illations againſt the ſetled Laws of Logick: But the moſt uſual inconſequencies are from particulars, from Negatives, and from Affirmative Concluſions in the ſecond Figure, wherein indeed offences are moſt frequent, and their diſcoveries not difficult.

CHAP.

CHAP. V.

Of Credulity and Supinity.

A Third cauſe of common Errors, is the Credulity of men, that is, an eaſie aſſent to what is obtruded, or a believing at firſt ear, what is delivered by others. This is a weakneſs in the underſtanding, without examination aſſenting unto things, which from their Natures and Cauſes do carry no perſwaſion; whereby men often ſwallow falſities for truths, dubioſities for certainties, feaſibilities for poſſibilities, and things impoſſible, as poſſibilities themſelves. Which, though a weakneſs of the Intellect, and moſt diſcoverable in vulgar heads: yet hath it ſometime fallen upon wiſer brains, and great advancers of Truth. Thus many wiſe *Athenians* ſo far forgot their Philoſophy, and the nature of Humane Production, that they deſcended unto belief, that the Original of their Nation was from the Earth, and had no other beginning, than from the ſeminality and womb of their great Mother. Thus is it not without wonder, how thoſe learned *Arabicks* ſo tamely delivered up their belief unto the abſurdities of the *Alcoran*. How the Noble *Geber*, *Avicenna*, and *Almanzor*, ſhould reſt ſatisfied in the Nature and Cauſes of Earthquakes, delivered from the Doctrine of their *Prophet*; that is, from the motion of a great Bull, upon whoſe Horns all the Earth is poiſed. How their faiths could decline ſo low, as to concede their generations in Heaven, to be made by the ſmell of a Citron, or that the felicity of their Paradiſe ſhould conſiſt in a Jubilee of Copulation, that is, a coition of one act prolonged unto fifty years. Thus is it almoſt beyond wonder, how the belief of reaſonable Creatures, ſhould ever ſubmit unto Idolatry: and the credulity of thoſe men ſcarce credible (without preſumption of a ſecond Fall) who could believe a Deity in the work of their own hands. For although in that ancient and diffuſed Adoration of Idols, unto the *Prieſts* and ſubtiler heads, the worſhip perhaps might be ſymbolical, and as thoſe Images ſome way related unto their Deities; yet was the Idolatry direct and down-right in the people; whoſe credulity is illimitable, who may be made believe that any thing is God; and may be made believe there is no God at all.

Obſtinate and irrational Scepticiſm juſtly cenſured.

And as credulity is the cauſe of Error, ſo Incredulity oftentimes of not enjoying truth: and that not only an obſtinate incredulity, whereby we will not acknowledge aſſent unto what is reaſonably inferred, but any Academical reſervation in matters of eaſie truth, or rather Sceptical Infidelity againſt the evidence of Reaſon and Senſe. For theſe are conceptions befalling wiſe men, as abſurd as the apprehenſions of fools, and the credulity of the people which promiſcuouſly ſwallow any thing. For this is not only derogatory unto the Wiſdom of God, who hath propoſed the World unto our knowledge, and thereby the notion of Himſelf; but alſo detractory unto the intellect, and ſenſe of man expreſſedly diſpoſed for that inquiſition. And therefore, *hoc tantùm ſcio, quòd nihil ſcio*, is not to be received in an abſolute ſenſe, but is comparatively expreſſed unto the number of things whereof our knowledge is ignorant. Nor will it acquit the inſatisfaction of thoſe who quarrel with all things, or diſpute of matters, concerning whoſe verities we have conviction from reaſon, or deciſion from the inerrable and requiſite conditions of ſenſe. And therefore if any affirm the earth doth move, and will not believe with us, it ſtandeth ſtill; becauſe he hath probable reaſons for it, and I no infallible ſenſe, nor reaſon againſt it, I will not quarrel with his aſſertion. But if, like *Zeno*, he ſhall walk about, and yet deny there is any motion in Nature, ſurely that man was conſtituted for *Anticyra*, and were a fit companion for thoſe, who having a conceit they are dead, cannot be convicted into the ſociety of the living.

The fourth is a Supinity, or neglect of Enquiry, even of matters whereof we

we doubt; rather believing, than going to ſee; or doubting with eaſe and *gratis*, than believing with difficulty or purchace. Whereby, either from a temperamental inactivity, we are unready to put in execution the ſuggeſtions or dictates of reaſon; or by a content and acquieſcence in every ſpecies of truth, we embrace the ſhadow thereof, or ſo much as may palliate its juſt and ſubſtantial acquirements. Had our fore-fathers ſat down in theſe reſolutions, or had their curioſities been ſedentary, who purſued the knowledge of things through all the corners of Nature, the face of truth had been obſcure unto us, whoſe luſtre in ſome part their induſtries have revealed.

Certainly the ſweat of their labours was not ſalt unto them, and they took delight in the duſt of their endeavours. For queſtionleſs, in Knowledge there is no ſlender difficulty; and Truth, which wiſe men ſay doth lye in a Well, is not recoverable by exantlation. It were ſome extenuation of the Curſe, if *In ſudore vultûs tui* were confinable unto corporal exercitations, and there ſtill remained a Paradiſe, or unthorny place of knowledge. But now our underſtandings being eclipſed, as well as our tempers infirmed, we muſt betake our ſelves to wayes of reparation, and depend upon the illumination of our endeavours. For thus we may in ſome meaſure repair our primary ruines, and build our ſelves Men again. And though the attempts of ſome have been precipitous, and their Enquiries ſo audacious, as to come within command of the flaming ſwords, and loſt themſelves in attempts above humanity; yet have the Enquiries of moſt defected by the way, and tired within the ſober circumference of Knowledge.

And this is the reaſon, why ſome have tranſcribed any thing; and although they cannot but doubt thereof, yet neither make Experiment by Senſe, nor Enquiry by Reaſon; but live in doubts of things, whoſe ſatisfaction is in their own power; which is indeed the inexcuſable part of our ignorance, and may perhaps fill up the charge of the laſt day. For, not obeying the dictates of Reaſon, and neglecting the cryes of Truth, we fail not only in the truſt of our undertakings, but in the intention of Man it ſelf. Which although more venial in ordinary conſtitutions, and ſuch as are not framed beyond the capacity of beaten notions; yet will it inexcuſably condemn ſome men, who having received excellent endowments, have yet ſat down by the way, and fruſtrated the intention of their habilities. For certainly, as ſome men have ſinned in the Principles of Humanity, and muſt anſwer, for not being men; ſo others offend, if they be not more. *Magis extra vitia, quàm cum virtutibus*, would commend thoſe: Theſe are not excuſable without an Excellency. For, great conſtitutions, and ſuch as are conſtellated unto knowledge, do nothing, till they out-do all; they come ſhort of themſelves, if they go not beyond others; and muſt not ſit down under the degree of Worthies. God expects no luſtre from the minor Stars; but if the Sun ſhould not illuminate all, it were a ſin in Nature. *Ultimus bonorum*, will not excuſe every man, nor is it ſufficient for all to hold the common level: Mens names ſhould not only diſtinguiſh them: A man ſhould be ſomething, that all men are not, and individual in ſomewhat beſide his proper Name. Thus while it exceeds not the bounds of reaſon and modeſty, we cannot condemn ſingularity. *Nos numerus ſumus*, is the Motto of the Multitude, and for that reaſon are they Fools. For things as they recede from unity, the more they approach to Imperfection and Deformity; for they hold their perfection in their Simplicities, and as they neareſt approach unto God.

Now as there are many great Wits to be condemned, who have neglected the increment of Arts, and the ſedulous purſuit of knowledge; ſo are there not a few very much to be pitied, whoſe induſtry being not attended with natural parts, they have ſweat to little purpoſe, and rolled the ſtone in vain. Which chiefly proceedeth from natural incapacity, and genial indiſpoſition, at leaſt, to thoſe particulars whereunto they apply their endeavours. And this is one reaſon why, though Univerſities be full of men, they are oftentimes empty of learning: Why, as there are ſome men do much without learning, ſo others but little with it, and few that attain to any meaſure of it. For many heads that undertake it, were never ſquared, nor timber'd for it. There are

Univerſities why many times full of Scholars and empty of Learning.

not only particular men, but whole Nations indiſpoſed for learning: whereunto is required, not only education, but a pregnant *Minerva*, and teeming Conſtitution; For the Wiſdom of God hath divided the *Genius* of men according to the different affairs of the World: and varied their inclinations according to the variety of Actions to be performed therein. Which they who conſider not, rudely ruſhing upon profeſſions and wayes of life, unequal to their natures; diſhonour not only themſelves and their Functions, but pervert the harmony of the whole World. For, if the World went on as God hath ordained it, and were every one imployed in points concordant to their Natures; Profeſſions, Arts and Common-wealths would riſe up of themſelves; nor needed we a Lanthorn to find a man in *Athens*.

The natural genius or inclination, how much to be regarded in the choice of a Profeſſion.

CHAP. VI.

Of Adherence unto Antiquity.

BUt the mortalleſt enemy unto Knowledge, and that which hath done the greateſt execution upon truth, hath been a peremptory adheſion unto Authority; and more eſpecially, the eſtabliſhing of our belief upon the Dictates of Antiquity. For (as every capacity may obſerve) moſt men of Ages preſent, ſo ſuperſtitiouſly do look upon Ages paſt, that the Authorities of the one, exceed the Reaſons of the other: Whoſe perſons indeed being far removed from our times, their Works, which ſeldom with us paſs uncontrolled, either by Contemporaries, or immediate Succeſſors, are now become out of the diſtance of Envies: and the farther removed from preſent times, are conceived to approach the nearer unto truth it ſelf. Now hereby methinks we manifeſtly delude our ſelves, and widely walk out of the track of Truth.

Immoderate reſpect unto Antiquity, a general cauſe of Error.

For, Firſt, Men hereby impoſe a Thraldom on their Times, which the ingenuity of no Age ſhould endure, or indeed the preſumption of any did ever yet enjoyn. Thus *Hippocrates* about two thouſand years ago, conceived it no injuſtice, either to examine or refute the Doctrines of his Predeceſſors: *Galen* the like, and *Ariſtotle* the moſt of any. Yet did not any of theſe conceive themſelves infallible, or ſet down their Dictates as Verities irrefragable: but when they either deliver their own Inventions, or reject other mens Opinions, they proceed with Judgement and Ingenuity; eſtabliſhing their aſſertions, not only with great ſolidity, but ſubmitting them alſo unto the correction of future diſcovery.

Secondly, Men that adore times paſt, conſider not that thoſe times were once preſent; that is, as our own are at this inſtant; and we our ſelves unto thoſe to come, as they unto us at preſent: as we relye on them, even ſo will thoſe on us, and magnifie us hereafter, who at preſent condemn our ſelves. Which very abſurdity is daily committed amongſt us, even in the eſteem and cenſure of our own times. And to ſpeak impartially, old Men, from whom we ſhould expect the greateſt example of Wiſdom, do moſt exceed in this point of folly; commending the dayes of their youth, which they ſcarce remember, at leaſt well underſtood not; extolling thoſe times their younger years have heard their Fathers condemn, and condemning thoſe times the gray heads of their poſterity ſhall commend. And thus is it the humour of many heads, to extol the dayes of their fore-fathers, and declaim againſt the wickedneſs of times preſent. Which notwithſtanding they cannot handſomly do, without the borrowed help and Satyrs of times paſt; condemning the Vices of their own times, by the expreſſions of Vices in times which they commend;

mend; which cannot but argue the community of Vice in both. *Horace* therefore, *Juvenal* and *Perſius* were no Prophets, although their lines did ſeem to indigitate and point at our times. There is a certain liſt of Vices committed in all Ages, and declaimed againſt by all Authors, which will laſt as long as Humane Nature; which digeſted into common places, may ſerve for any Theme, and never be out of date until Dooms-day.

Thirdly, The Teſtimonies of Antiquity, and ſuch as paſs oraculouſly amongſt us, were not, if we conſider them, alwayes ſo exact, as to examine the Doctrine they delivered. For ſome, and thoſe the acuteſt of them, have left unto us many things of falſity; controllable, not only by critical and collective Reaſon, but common and Countrey Obſervation.

Hereof there want not many examples in *Ariſtotle*, through all his Book of Animals; we ſhall inſtance only in three of his Problems, and all contained under one Section. The firſt enquireth, Why a Man doth cough, but not an Ox or Cow; whereas notwithſtanding the contrary is often obſerved by Husbandmen, and ſtands confirmed by thoſe who have expreſly treated *De Re Ruſtica*, and have alſo delivered divers remedies for it. Why Juments, as Horſes, Oxen, and Aſſes, have no eructation or belching, whereas indeed the contrary is often obſerved, and alſo delivered by *Columella*. And thirdly, Why Man alone hath gray hairs? whereas it cannot eſcape the eyes, and ordinary obſervation of all men, that Horſes, Dogs, and Foxes, wax gray with age in our Countreys; and in the colder Regions, many other Animals without it. And though favourable conſtructions may ſomewhat extenuate the rigour of theſe conceſſions, yet will ſcarce any palliate that in the fourth of his Meteors, That Salt is eaſieſt diſſolvable in cold water: Nor that of *Dioſcorides*, that Quick-ſilver is beſt preſerved in Veſſels of Tin and Lead.

Other Authors write often dubiouſly, even in matters wherein is expected a ſtrict and definitive truth; extenuating their affirmations, with *aiunt*, *ferunt*, *fortaſſe*: as *Dioſcorides*, *Galen*, *Ariſtotle*, and many more. Others by hearſay; taking upon truſt moſt they have delivered, whoſe Volumes are meer Collections, drawn from the mouths or leaves of other Authors; as may be obſerved in *Pliny*, *Ælian*, *Athenæus*, and many more. Not a few tranſcriptively, ſubſcribing their Names unto other mens endeavours, and meerly tranſcribing almoſt all they have written. The *Arabs* tranſcribing the *Greeks*, the *Greeks* and *Latines*, each other.

The Antiquity, and ſome notable inſtances of Plagiariſm, that is, of tranſcribing or filching Authors.

Thus hath *Juſtine* borrowed all from *Trogus Pompeius*, and *Julius Solinus* in a manner tranſcribed *Pliny*. Thus have *Lucian* and *Apuleius* ſerved *Lucius Patenſis*; men both living in the ſame time, and both tranſcribing the ſame Author, in thoſe famous Books, Entituled *Lucius* by the one, and *Aureus Aſinus* by the other. In the ſame meaſure hath *Simocrates* in his Tract *De Nilo*, dealt with *Diodorus Siculus*, as may be obſerved in that work annexed unto *Herodotus*, and tranſlated by *Jungermannus*. Thus *Eratoſthenes* wholly tranſlated *Timotheus de Inſulis*, not reſerving the very Preface. The ſame doth *Strabo* report of *Eudorus*, and *Arſtion*, in a Treatiſe entituled *De Nilo*. *Clemens Alexandrinus* hath obſerved many examples hereof among the *Greeks*; and *Pliny* ſpeaketh very plainly in his Preface, that conferring his Authors, and comparing their Works together, he generally found thoſe that went before *verbatim* tranſcribed by thoſe that followed after, and their Originals never ſo much as mentioned. To omit how much the wittieſt * Piece of *Ovid* is beholden unto *Parthenius Chius*; even the magnified *Virgil* hath borrowed, almoſt all his Works; his *Eclogues* from *Theocritus*, his *Georgicks* from *Heſiod* and *Aratus*, his *Æneids* from *Homer*, the ſecond Book whereof containing the exploit of *Sinon* and the *Trojan* Horſe (as *Macrobius* obſerveth) he hath *verbatim* derived from *Piſander*. Our own Profeſſion is not excuſable herein. Thus *Oribaſius*, *Ætius*, and *Ægineta*, have in a manner tranſcribed *Galen*. But *Marcellus Empericus*, who hath left a famous Work *De Medicamentis*, hath word for word tranſcribed all *Scribonius Largus*, *De Compoſitione Medicamentorum*, and not left out his very Peroration. Thus may we perceive the Ancients were but men, even like our ſelves. The practice of Tranſcription in

* His *Metamorphoſis*.

our

our dayes; was no Monster in theirs: *Plagiary* had not its Nativity with Printing, but began in times when Thefts were difficult, and the paucity of Books scarce wanted that Invention.

Nor did they only make large use of other Authors, but often without mention of their Names. *Aristotle*, who seems to have borrowed many things from *Hippocrates*, in the most favourable construction, makes mention but *once of him, and that by the by, and without reference unto his present Doctrine. *Virgil*, so much beholding unto *Homer*, hath not his Name in all his Works: and *Pliny*, who seems to borrow many Authors out of *Dioscorides*, hath taken no notice of him. I wish men were not still content to plume themselves with others Feathers. Fear of discovery, not single ingenuity, affords Quotations, rather than Transcriptions; wherein notwithstanding the Plagiarism of many makes little consideration, whereof though great Authors may complain, small ones cannot but take notice.

* In his Politicks.

Fourthly, While we so eagerly adhere unto Antiquity, and the accounts of elder times, we are to consider the fabulous condition thereof. And that we shall not deny, if we call to mind the Mendacity of *Greece*, from whom we have received most relations; and that a considerable part of ancient Times, was by the *Greeks* themselvs termed μύθικον, that is, made up, or stuffed out with Fables. And surely the fabulous inclination of those dayes, was greater than any since; which swarmed so with Fables, and from such slender grounds, took hints for fictions, poysoning the World ever after: wherein how far they exceeded, may be exemplified from *Palæphatus*, in his Book of *Fabulous Narrations*. That Fable of *Orpheus*, who by the melody of his Musick made Woods and Trees to follow him, was raised upon a slender foundation; for there were a crew of mad women retired unto a Mountain, from whence, being pacified by his Musick, they descended with boughs in their hands, which unto the fabulosity of those times, proved a sufficient ground to celebrate unto all posterity the Magick of *Orpheus*'s Harp, and its power to attract the senseless Trees about it. That *Medea* the famous Sorceress could renew youth, and make old men young again, was nothing else, but that from the knowledge of Simples, she had a Receipt to make white hair black, and reduce old heads into the tincture of youth again. The Fable of *Geryon* and *Cerberus* with three heads, was this: *Geryon* was of the City *Tricarinia*, that is, of three heads, and *Cerberus* of the same place was one of his Dogs, which running into a Cave upon pursuit of his Masters Oxen, *Hercules* perforce drew him out of that place, from whence the conceits of those dayes affirmed no less, than that *Hercules* descended into Hell, and brought up *Cerberus* into the habitation of the living. Upon the like grounds was raised the figment of *Briareus*, who dwelling in a City called *Hecatonchiria*, the fancies of those times assigned him an hundred hands. 'Twas ground enough to fansie Wings unto *Dædalus*, in that he stole out of a Window from *Minos*, and sailed away with his Son *Icarus*; who steering his course wisely, escaped: but his Son carrying too high a Sail was drowned. That *Niobe* weeping over her Children, was turned into a Stone, was nothing else, but that during her life she erected over their Sepulchres a Marble Tomb of her own. When *Acteon* had undone himself with Dogs, and the prodigal attendants of hunting, they made a solemn story how he was devoured by his Hounds. And upon the like grounds was raised the Anthropophagie of *Diomedes* his Horses. Upon a slender foundation was built the Fable of the *Minotaure*; for one *Taurus* a servant of *Minos*, gat his Mistris *Pasiphae* with child, from whence the Infant was named *Minotaurus*. Now this unto the fabulosity of those times, was thought sufficient to accuse *Pasiphae* of Bestiality, or admitting conjunction with a Bull: and in succeeding Ages gave a hint of depravity unto *Domitian* to act the Fable into a reality. In like manner, as *Diodorus* plainly delivereth, the famous Fable of *Charon* had its Nativity; who being no other but the common Ferry-man of *Egypt*, that wafted over the dead bodies from *Memphis*, was made by the *Greeks* to be the Ferry-man of Hell, and solemn Stories raised after of him. Lastly, we shall not need to enlarge, if that be true which grounded the generation of *Castor*

An ancient Author who writ Περὶ ἀπίστων, *sive de incredibilibus*, whereof some part is yet extant.

The Fable of *Orpheus* his Harp, *&c.* whence occasioned.

Eating of Mans Flesh.

and *Helena* out of an Egg, because they were born and brought up in an upper room, according unto the Word ᾠόν, which with the *Lacedæmonians* had also that signification.

Fifthly, We applaud many things delivered by the Ancients, which are in themselves but ordinary, and come short of our own Conceptions. Thus we usually extol, and our Orations cannot escape the sayings of the wise men of *Greece*. *Nosce teipsum*, of *Thales*: *Nosce tempus*, of *Pittacus*: *Nihil nimis*, of *Cleobulus*; which notwithstanding, to speak indifferently, are but Vulgar Precepts in Morality, carrying with them nothing above the line, or beyond the extemporary sententiosity of common conceits with us. Thus we magnifie the Apothegms or reputed Replies of Wisdom, whereof many are to be seen in *Laertius*, more in *Lycosthenes*, not a few in the second Book of *Macrobius*, in the Salts of *Cicero*, *Augustus*, and the Comical Wits of those times: in most whereof there is not much to admire, and are methinks exceeded, not only in the replies of wise men, but the passages of society, and urbanities of our times. And thus we extol their Adages, or Proverbs; and *Erasmus* hath taken great pains to make Collections of them, whereof, notwithstanding, the greater part will, I believe, unto indifferent Judges be esteemed no extraordinaries: and may be parallel'd, if not exceeded, by those of more unlearned Nations, and many of our own.

Sixthly, We urge Authorities in Points that need not, and introduce the testimony of ancient Writers, to confirm things evidently believed, and whereto no reasonable hearer but would assent without them; such as are, *Nemo mortalium omnibus horis sapit*. *Virtute nil præstantius, nil pulchrius*. *Omnia vincit amor*. *Præclarum quiddam veritas*. All which, although known and vulgar, are frequently urged by many men; and though trivial verities in our mouths, yet noted from *Plato*, *Ovid*, and *Cicero*, they become reputed elegancies. For many hundred to instance in one we meet with while we are writing. *Antonius Guevara* that elegant *Spaniard*, in his Book entituled, *The Dial of Princes*, beginneth his Epistle thus. *Apollonius Thyanæus*, disputing with the Scholars of *Hiarchas*, said, That among all the affections of Nature, nothing was more natural, than the desire all have to preserve life. Which being a confessed Truth, and a Verity acknowledged by all, it was a superfluous affectation to derive its Authority from *Apollonius*, or seek a confirmation thereof as far as *India*, and the learned Scholars of *Hiarchas*. Which whether it be not all one as to strengthen common Dignities and Principles known by themselves, with the Authority of Mathematicians; or think a man should believe, the whole is greater than its parts, rather upon the Authority of *Euclide*, than if it were propounded alone; I leave unto the second and wiser cogitations of all men. 'Tis sure a Practice that savours much of Pedantry; a reserve of Puerility we have not shaken off from School; where being seasoned with Minor sentences, by a neglect of higher Enquiries, they prescribe upon our riper ears, and are never worn out, but with our memories.

A pedantical vanity to quote Authors in matters of common sense, or of familiar acknowledgement.

Lastly, While we so devoutly adhere unto Antiquity in some things, we do not consider we have deserted them in several others. For they indeed have not only been imperfect, in the conceit of some things, but either ignorant or erroneous in many more. They understood not the motion of the eighth Sphere from West to East, and so conceived the longitude of the Stars invariable. They conceived the Torrid Zone unhabitable, and so made frustrate the goodliest part of the Earth. But we now know 'tis very well empeopled, and the habitation thereof esteemed so happy, that some have made it the proper seat of Paradise; and been so far from judging it unhabitable, that they have made it the first habitation of all. Many of the Ancients denyed the *Antipodes*, and some unto the penalty of contrary affirmations; but the experience of our enlarged Navigations, can now assert them beyond all dubitation. Having thus totally relinquish'd them in some things, it may not be presumptuous, to examine them in others; but surely most unreasonable, to adhere to them in all, as though they were infallible, or could not err in any.

Some remarkable mistakes among the Ancients.

CHAP.

CHAP. VII.

Of Authority.

NOR is only a reſolved proſtration unto Antiquity a powerful enemy unto Knowledge, but any confident adherence unto Authority, or reſignation of our judgements upon the teſtimony of Age or Author whatſoever.

For, Firſt, To ſpeak generally, an argument from Authority to wiſer examinations, is but a weaker kind of proof; it being but a Topical Probation, and as we term it, an inartificial Argument, depending upon a naked aſſeveration: wherein neither declaring the cauſes, affections or adjuncts of what we believe, it carrieth not with it the reaſonable inducements of knowledge. And therefore *Contra negantem principia*, *Ipſe dixit*, or *Oportet diſcentem credere*; although Poſtulates very accommodable unto *Junior* indoctrinations; yet are their Authorities but temporary, and not to be embraced beyond the minority of our intellectuals. For our advanced beliefs are not to be built upon Dictates, but having received the probable inducements of truth, we become emancipated from teſtimonial engagements, and are to erect upon the ſurer baſe of Reaſon. Authority (ſimply) but a mean argument, eſpecially

Secondly, Unto reaſonable Perpenſions it hath no place in ſome Sciences, ſmall in others, and ſuffereth many reſtrictions, even where it is moſt admitted. It is of no validity in the Mathematicks, eſpecially the mother part thereof, Arithmetick and Geometry. For theſe Sciences concluding from Dignities and Principles known by themſelves, receive not ſatisfaction from probable Reaſons, much leſs from bare and peremptory Aſſeverations. And therefore if all *Athens* ſhould decree, that in every Triangle, two ſides, which ſoever be taken, are greater than the ſide remaining, or that in rectangle Triangles the ſquare which is made of the ſide that ſubtendeth the right Angle, is equal to the ſquares which are made of the ſides containing the right Angle: although there be a certain truth therein, Geometricians notwithſtanding would not receive ſatisfaction without demonſtration thereof. 'Tis true, by the vulgarity of Philoſophers, there are many Points believed without probation; nor if a man affirm from *Ptolomy*, that the Sun is bigger than the Earth, ſhall he probably meet with any contradiction: whereunto notwithſtanding Aſtronomers will not aſſent without ſome convincing argument or demonſtrative proof thereof. And therefore certainly of all men a Philoſopher ſhould be no ſwearer; for an Oath which is the end of controverſies in Law, cannot determine any here; nor are the deepeſt Sacraments or deſperate imprecations of any force to perſwade, where reaſon only, and neceſſary *mediums* muſt induce. in the Mathematicks.

In Natural Philoſophy more generally purſued amongſt us, it carrieth but ſlender conſideration; for that alſo proceeding from ſetled Principles, therein is expected a ſatisfaction from ſcientifical progreſſions, and ſuch as beget a ſure rational belief. For if Authority might have made out the aſſertions of Philoſophy, we might have held, that Snow was black, that the Sea was but the ſweat of the Earth, and many of the like abſurdities. Then was *Ariſtotle* injurious to fall upon *Meliſſus*, to reject the aſſertions of *Anaxagoras*, *Anaximander*, and *Empedocles*; then were we alſo ungrateful unto himſelf; from whom our *Junior* endeavours embracing many things on his authority, our mature and ſecondary enquiries are forced to quit thoſe receptions, and to adhere unto the nearer accounts of Reaſon. And although it be not unuſual, even in Philoſophical Tractates to make enumeration of Authors, yet are there reaſons uſually introduced, and to ingenious Readers do carry the ſtroke in the perſwaſion. And ſurely if we account it reaſonable among our ſelves, and not injurious unto rational Authors, no farther to abett their Opinions, than And Phyſicks.

as they are ſupported by ſolid Reaſons: certainly with more excuſable reſervation may we ſhrink at their bare teſtimonies, whoſe argument is but precarious, and ſubſiſts upon the charity of our aſſentments.

In Morality, Rhetorick, Law and Hiſtory, there is I confeſs a frequent and allowable uſe of teſtimony; and yet herein I perceive, it is not unlimitable, but admitteth many reſtrictions. Thus in Law both Civil and Divine: that is only eſteemed a legal teſtimony, which receives comprobation from the mouths of at leaſt two witneſſes; and that not only for prevention of calumny, but aſſurance againſt miſtake; whereas notwithſtanding the ſolid reaſon of one man, is as ſufficient as the clamour of a whole Nation; and with imprejudicate apprehenſions begets as firm a belief as the authority or aggregated teſtimony of many hundreds. For Reaſon being the very root of our Natures, and the Principles thereof common unto all, what is againſt the Laws of true Reaſon, or the unerring underſtanding of any one, if rightly apprehended; muſt be diſclaimed by all Nations, and rejected even by mankind.

Again, A teſtimony is of ſmall validity, if deduced from men out of their own profeſſion; ſo if *Lactantius* affirm the Figure of the Earth is plain, or *Auſtin* deny there are *Antipodes*; though Venerable Fathers of the Church, and ever to be honoured, yet will not their Authorities prove ſufficient to ground a belief thereon. Whereas notwithſtanding the ſolid reaſon or confirmed experience of any man, is very approvable in what profeſſion ſoever. So *Raymund Sebund* a Phyſician of *Tholouze*, beſides his Learned Dialogues *De Natura humana*, hath written a Natural Theologie; demonſtrating therein the Attributes of God, and attempting the like in moſt Points of Religion. So *Hugo Grotius* a Civilian, did write an excellent Tract of the Verity of Chriſtian Religion. Wherein moſt rationally delivering themſelves, their Works will be embraced by moſt that underſtand them, and their Reaſons enforce Belief, even from prejudicate Readers. Neither indeed have the Authorities of men been ever ſo awful; but that by ſome they have been rejected, even in their own profeſſions. Thus *Ariſtotle* affirming the Birth of the Infant, or time of its geſtation, extendeth ſometimes unto the eleventh Month, but *Hippocrates* averring, that it exceedeth not the tenth: *Adrian* the Emperour in a ſolemn Proceſs, determined for *Ariſtotle*; but *Juſtinian* many years after took in with *Hippocrates*, and reverſed the Decree of the other. Thus have Councils, not only condemned private men, but the Decrees and Acts of one another. So *Galen* after all his Veneration of *Hippocrates*, in ſome things hath fallen from him. *Avicen* in many from *Galen*; and others ſucceeding from him. And although the ſingularity of *Paracelſus* be intolerable, who ſparing only *Hippocrates*, hath reviled not only the Authors, but almoſt all the Learning that went before him; yet is it not much leſs injurious unto knowledge, obſtinately and invincibly to ſide with any one. Which humour unhappily poſſeſſing many, they have by prejudice withdrawn themſelves into parties, and contemning the ſoveraignty of Truth, ſeditiouſly abetted the private diviſions of Error.

Moreover, a Teſtimony in points Hiſtorical, and where it is of unavoidable uſe, is of no illation in the Negative, nor is it of conſequence, that *Herodotus* writing nothing of *Rome*, there was therefore no ſuch City in his time; or becauſe *Dioſcorides* hath made no mention of Unicorns horn, there is therefore no ſuch thing in Nature. Indeed, intending an accurate enumeration of Medical materials, the omiſſion hereof affords ſome probability, it was not uſed by the Ancients, but will not conclude the non-exiſtence thereof. For ſo may we annihilate many Simples unknown to his Enquiries, as *Senna*, *Rhubarb*, *Bezoar*, *Ambregris*, and divers others. Whereas indeed the Reaſon of Man hath not ſuch reſtraint; concluding not only Affirmatively, but Negatively; not only affirming there is no Magnitude beyond the laſt Heavens, but alſo denying there is any Vacuity within them. Although it be confeſſed, the Affirmative hath the prerogative illation, and *Barbara* engroſſeth the powerful demonſtration.

Laſtly,

Laſtly, The ſtrange relations made by Authors, may ſufficiently diſcourage our adherence unto Authority, and which if we believe, we muſt be apt to ſwallow any thing: thus *Baſil* will tell us, the Serpent went erect like Man, and that that Beaſt could ſpeak before the Fall. *Toſtatus* would make us believe, that *Nilus* encreaſeth every New Moon. *Leonardo Fioravanti*, an Italian Phyſician, beſide many other ſecrets, aſſumeth unto himſelf the diſcovery of one concerning Pellitory of the Wall; that is, that it never groweth in the ſight of the *North* Star. *Done ſi poſſa vedere la ſtella Tramontana*, wherein how wide he is from Truth, is eaſily diſcoverable unto every one, who hath but Aſtronomy enough to know that Star. *Franciſcus Sanctius* in a laudable Comment upon *Alciat*'s Emblems, affirmeth, and that from experience, a Nightingale hath no Tongue. *Avem Philomelam lingua carere pro certo affirmare poſſum, niſi me oculi fallunt.* Which if any man for a while ſhall believe upon his experience, he may at his leiſure refute it by his own. What fool almoſt would believe, at leaſt, what wiſe man would rely upon that Antidote delivered by *Pierius* in his Hieroglyphicks againſt the Sting of a Scorpion? that is, to ſit upon an Aſs with ones face towards his Tail; for ſo the pain leaveth the Man, and paſſeth into the Beaſt. It were methinks but an uncomfortable Receipt for a Quartane Ague (and yet as good perhaps as many others uſed) to have recourſe unto the *Recipe* of *Sammonicus*; that is, to lay the fourth Book of *Homer*'s Iliads under ones head, according to the Precept of that Phyſician and Poet, *Mœoniæ Iliados quartum ſuppone trementi.* There are ſurely few that have belief to ſwallow, or hope enough to experiment the Collyrium of *Albertus*; which promiſeth a ſtrange effect, and ſuch as Thieves would count ineſtimable, that is, to make one ſee in the dark: yet thus much, according unto his Receipt, will the right eye of an Hedge-hog boiled in Oyl, and preſerved in a Brazen Veſſel effect. As ſtrange it is, and unto vicious inclinations were worth a Nights lodging with *Lais*, what is delivered in *Kiranides*; that the left Stone of a Weeſel, wrapt up in the skin of a She-Mule, is able to ſecure Incontinency from Conception.

An Eye Medicine.

Ten thouſand drachms.

Theſe with ſwarms of others, have men delivered in their Writings, whoſe Verities are only ſupported by their Authorities: But being neither conſonant unto Reaſon, nor correſpondent unto Experiment, their affirmations are unto us no Axioms: We eſteem thereof as things unſaid, and account them but in the liſt of nothing. I wiſh herein the *Chymiſts* had been more ſparing; who over-magnifying their Preparations, inveigle the Curioſity of many, and delude the Security of moſt. For if Experiments would anſwer their Encomiums, the Stone and Quartane Agues were not opprobrious unto Phyſicians: we might contemn that firſt and moſt uncomfortable Aphoriſm of *Hippocrates*, for ſurely that Art were ſoon attained, that hath ſo general Remedies; and life could not be ſhort, were there ſuch to prolong it.

Ars longa, vita brevis.

CHAP. VIII.

A brief enumeration of Authors.

NOW for as much as we have diſcourſed of Authority, and there is ſcarce any Tradition or popular Error, but ſtands alſo delivered by ſome good Author; we ſhall endeavour a ſhort diſcovery of ſuch, as for the major part have given Authority hereto: who though excellent and uſeful Authors, yet either being tranſcriptive, or following common relations, their accounts are not to be ſwallowed at large, or entertained without all circumſpection. In whom *Ipſe dixit*, although it be no powerful Argument in any,

any, is yet leſs authentick than in many other, becauſe they deliver not their own experiences, but others affirmations, and write from others, as later Pens from them.

The Authors judgement, or a character given of ſome eminent Authors.

1. The firſt in order, as alſo in time, ſhall be *Herodotus* of *Halicarnaſſus*. An excellent and very elegant Hiſtorian; whoſe Books of Hiſtory were ſo well received in his own days, that at their rehearſal in the Olympick Games, they obtained the Names of the nine Muſes; and continued in ſuch eſteem unto deſcending Ages, that *Cicero* termed him, *Hiſtoriarum parens*. And *Dionyſius* his Countrey-man, in an Epiſtle to *Pompey*, after an expreſs compariſon, affords him the better of *Thucydides*; all which notwithſtanding, he hath received from ſome, the ſtyle of *Mendaciorum pater*. His authority was much infringed by *Plutarch*, who being offended with him, as *Polybius* had been with *Philarchus*, for ſpeaking too coldly of his Countreymen, hath left a particular Tract, *De malignitate Herodoti*. But in this latter Century *Camerarius* and *Stephanus* have ſtepped in, and by their witty Apologies, effectually endeavoured to fruſtrate the Arguments of *Plutarch*, or any other. Now in this Author, as may be obſerved in our enſuing Diſcourſe, and is better diſcernable in the peruſal of himſelf, there are many things fabulouſly delivered, and not to be accepted as Truths: whereby nevertheleſs if any man be deceived, the Author is not ſo culpable as the Believer. For he indeed imitating the Father Poet, whoſe Life he hath alſo written, and as *Thucydides* obſerveth, as well intending the delight, as benefit of his Reader, hath beſprinkled his Work with many fabuloſities; whereby if any man be led into Error, he miſtaketh the intention of the Author, who plainly confeſſeth he writeth many things by hear-ſay, and forgetteth a very conſiderable caution of his; that is, *Ego quæ fando cognovi, exponere narratione mea debeo omnia: credere autem eſſe vera omnia, non debeo.*

2. In the ſecond place is *Cteſias* the Cnidian, Phyſician unto *Artaxerxes* King of *Perſia*; his Books are often recited by ancient Writers, and by the induſtry of *Stephanus* and *Rhodomanus*, there are extant ſome fragments thereof in our dayes; he wrote the Hiſtory of *Perſia*, and many Narrations of *India*. In the firſt, as having a fair opportunity to know the truth, and as *Diodorus* affirmeth, the peruſal of *Perſian* Records, his Teſtimony is acceptable. In his *Indian* Relations, wherein are contained ſtrange and incredible accounts, he is ſurely to be read with ſuſpenſion. Theſe were they which weakned his authority with former Ages; for as we may obſerve, he is ſeldom mentioned, without a derogatory Parentheſis in any Author. *Ariſtotle*, beſides the frequent undervaluing of his authority, in his Books of Animals gives him the lye no leſs than twice, concerning the ſeed of Elephants. *Strabo* in his eleventh Book hath left a harder cenſure of him. *Equidem facilius Heſiodo & Homero aliquis fidem adhibuerit, itémque Tragicis Poetis, quam Cteſiæ, Herodoto, Hellanico & eorum ſimilibus.* But *Lucian* hath ſpoken more plainly than any. *Scripſit Cteſias de Indorum regione, deque iis quæ apud illos ſunt, ea quæ nec ipſe vidit, neque ex ullius ſermone audivit.* Yet were his relations taken up by ſome ſucceeding Writers, and many thereof revived by our Countrey-man, Sir *John Mandevil*, Knight and Doctor in Phyſick; who after thirty years peregrenation dyed at *Liege*, and was there honourably interred. He left a Book of his Travels, which hath been honoured with the tranſlation of many Languages, and now continued above three hundred years; herein he often atteſteth the fabulous relations of *Cteſias*, and ſeems to confirm the refuted accounts of Antiquity. All which may ſtill be received in ſome acceptions of Morality, and to a pregnant invention may afford commendable Mythologie; but in a natural and proper expoſition, it containeth impoſſibilities, and things inconſiſtent with Truth.

There is a Book *De mirandis auditionibus*, aſcribed unto *Ariſtotle*; another *De mirabilibus narrationibus*, written long after by *Antigonus*; another alſo of the ſame Title by *Plegon Trallianus*, tranſlated by *Xilander*, and with the Annotations of *Meurſius*, all whereof make good the promiſe of their Titles, and may be read with caution. Which if any man ſhall likewiſe obſerve in the Lecture of *Philoſtratus*, concerning the Life of *Apollonius*, and even

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in ſome paſſages of the ſober and learned *Plutarchus*; or not only in ancient Writers, but ſhall carry a wary eye on *Paulus Venetus*, *Jovius*, *Olaus Magnus*, *Nierembergius*, and many others: I think his circumſpection is laudable, and he may thereby decline occaſion of Error.

4. *Dioſcorides Anazarbeus*, he wrote many Books in Phyſick; but ſix thereof *De Materia Medica*, have found the greateſt eſteem; he is an Author of good antiquity and uſe, preferred by *Galen* before *Cratevas*, *Pamphilus*, and all that attempted the like deſcription before him; yet all he delivereth therein is not to be conceived Oraculous. For beſide that, following the Wars under *Anthony*, the courſe of his life would not permit a punctual *Examen* in all; there are many things concerning the nature of Simples traditionally delivered, and to which I believe he gave no aſſent himſelf. It had been an excellent Receit, and in his time when Saddles were ſcarce in faſhion, of very great uſe, if that were true which he delivers, that *Vitex* or *Agnus Caſtus* held only in the hand, preſerveth the Rider from galling. It were a ſtrange effect, and Whores would forſake the experiment of *Savine*, if that were a truth which he delivereth of Brake or female Fearn, that onely treading over it, it cauſeth a ſudden abortion. It were to be wiſhed true, and women would idolize him, could that be made out which he recordeth of *Phyllon*, *Mercury*, and other Vegetables, that the juice of the male Plant drunk, or the leaves but applied unto the genitals, determines their conceptions unto Males. In theſe relations although he be more ſparing, his predeceſſors were very numerous; and *Galen* hereof moſt ſharply accuſeth *Pamphilus*. Many of the like nature we meet ſometimes in *Oribaſius*, *Ætius*, *Trallianus*, *Serapion*, *Evax*, and *Marcellus*, whereof ſome containing no colour of verity, we may at firſt ſight reject them; others which ſeem to carry ſome face of truth, we may reduce unto experiment. And herein we ſhall rather perform good offices unto Truth, than any diſſervice unto their Relators, who have well deſerved of ſucceeding Ages; from whom having received the conceptions of former Times, we have the readier hint of their conformity with ours, and may accordingly explore and ſift their verities.

A like opinion there is now of Elder.

5. *Plinius Secundus* of *Verona*; a man of great Eloquence, and induſtry indefatigable, as may appear by his writings, eſpecially thoſe now extant, and which are never like to periſh, but even with learning it ſelf; that is, his Natural Hiſtory. He was the greateſt Collector or Rhapſodiſt of all the Latines, and as *Suetonius* obſerveth, he collected this piece out of two thouſand Latine and Greek Authors. Now what is very ſtrange, there is ſcarce a popular error paſſant in our days, which is not either directly expreſſed, or deductively contained in this Work; which being in the hands of moſt men, hath proved a powerful occaſion of their propagation. Wherein, notwithſtanding, the credulity of the Reader is more condemnable than the curioſity of the Author: for commonly he nameth the Authors from whom he received thoſe accounts, and writes but as he reads, as in his Preface to *Veſpaſian* he acknowledgeth.

Pliny's Natural Hiſtory collected out of 2000. ſeveral Authors.

6. *Claudius Ælianus*, who flouriſhed not long after in the Reign of *Trajan*, unto whom he dedicated his Tacticks; an elegant and miſcellaneous Author: he hath left two Books which are in the hands of every one, his Hiſtory of Animals, and his *Varia Hiſtoria*. Wherein are contained many things ſuſpicious, not a few falſe, ſome impoſſible; he is much beholding unto *Cteſias*, and in many uncertainties writes more confidently than *Pliny*.

7. *Julius Solinus*, who lived alſo about his time: He left a Work entituled *Polyhiſtor*, containing great variety of matter, and is with moſt in good requeſt at this day. But to ſpeak freely what cannot be concealed, it is but *Pliny* varied, or a tranſcription of his Natural Hiſtory: nor is it without all wonder it hath continued ſo long, but is now likely, and deſerves indeed to live for ever; not only for the elegancy of the Text, but the excellency of the Comment, lately performed by *Salmaſius*, under the name of *Plinian* Exercitations.

8. *Athenæus*,

8. *Athenæus*, a delectable Author, very various, and justly stiled by *Casaubon*, *Græcorum Plinius*. There is extant of his, a famous Piece, under the name of *Deipnosophista*, or *Cœna Sapientum*, containing the Discourse of many learned men, at a Feast provided by *Laurentius*. It is a laborious Collection out of many Authors, and some whereof are mentioned no where else. It containeth strange and singular relations, not without some spice or sprinkling of all Learning. The Author was probably a better Grammarian than Philosopher, dealing but hardly with *Aristotle* and *Plato*, and betrayeth himself much in his Chapter *De Curiositate Aristotelis*. In brief, he is an Author of excellent use, and may with discretion be read unto great advantage: and hath therefore well deserved the Comments of *Casaubon* and *Dalecampius*. But being miscellaneous in many things, he is to be received with suspition: for such as amass all relations, must erre in some, and may without offence be unbelieved in many.

9. We will not omit the works of *Nicander*, a Poet of good antiquity: that is, his *Theriaca*, and *Alexipharmaca*, Translated and Commented by *Gorræus*: for therein are contained several Traditions, popular Conceits of venomous Beasts; which only deducted, the Work is to be embraced, as containing the first description of poysons and their antidotes, whereof *Dioscorides*, *Pliny* and *Galen*, have made especial use in elder times; and *Ardoynus Grevinus*, and others, in times more near our own. We might perhaps let pass *Oppianus*, that famous Cilician Poet. There are extant of his in Greek, four Books of Cynegeticks or Venation, five of Halieuticks or Piscation, commented and published by *Ritterhusius*; wherein describing Beasts of venery and Fishes, he hath indeed but sparingly inserted the vulgar conceptions thereof. So that abating the annual mutation of Sexes in the *Hyæna*, the single Sex of the *Rhinoceros*, the Antipathy between two Drums, of a Lamb and a Wolfes skin, the informity of Cubs, the venation of *Centaures*, the copulation of the *Murena* and the Viper, with some few others, he may be read with great delight and profit. It is not without some wonder his Elegant Lines are so neglected. Surely hereby we reject one of the best Epick Poets, and much condemn the Judgement of *Antoninus*, whose apprehensions so honoured his Poems, that as some report, for every verse, he assigned him a Stater of Gold.

That write Hexameters, or long verses.

10. More warily are we to receive the relations of *Philes*, who in *Greek Iambicks* delivered the proprieties of Animals, for herein he hath amassed the vulgar accounts recorded by the Ancients, and hath therein especially followed *Ælian*. And likewise *Johannes Tzetzes*, a Grammarian, who besides a Comment upon *Hesiod* and *Homer*, hath left us *Chiliads de Varia Historia*; wherein delivering the accounts of *Ctesias*, *Herodotus*, and most of the Ancients, he is to be embraced with caution, and as a transcriptive Relator.

11. We cannot without partiality omit all caution even of holy Writers, and such whose names are venerable unto all posterity: not to meddle at all with miraculous Authors, or any Legendary Relators, we are not without circumspection to receive some Books even of authentick and renowned Fathers. So are we to read the leaves of *Basil* and *Ambrose*, in their Books entituled *Hexameron*, or *The Description of the Creation*; Wherein delivering particular accounts of all the Creatures, they have left us relations suitable to those of *Ælian*, *Plinie* and other Natural Writers; whose authorities herein they followed, and from whom most probably they desumed their Narrations. And the like hath been committed by *Epiphanius* in his Physiologie: that is, a Book he hath left concerning the Nature of Animals. With no less caution must we look on *Isidore* Bishop of *Sevil*; who having left in twenty Books, an accurate work *De Originibus*, hath to the Etymologie of Words, superadded their received Natures; wherein most generally he consents with common Opinions and Authors which have delivered them.

12. *Albertus* Bishop of *Ratisbone*, for his great Learning and latitude of Knowledge, sirnamed *Magnus*. Besides Divinity, he hath written many Tracts in Philosophy; what we are chiefly to receive with caution, are his Natural Tractates,

Tractates, more especially those of Minerals, Vegetables, and Animals, which are indeed chiefly Collections out of *Aristotle*, *Ælian*, and *Pliny*, and respectively contain many of our popular Errors. A man who hath much advanced these Opinions by the authority of his Name, and delivered most Conceits, with strict Enquiry into few. In the same *Classis* may well be placed *Vincentius Belluacensis*, or rather he from whom he collected his *Speculum naturale*, that is, *Guilielmus de Conchis*; and also *Hortus Sanitatis*, and *Bartholomeus Glanvil*, sirnamed *Anglicus*, who writ *De proprietatibus Rerum*. Hither also may be referred *Kiranides*, which is a Collection out of *Harpocration* the Greek, and sundry Arabick Writers; delivering not only the Natural but Magical propriety of things; a Work as full of Vanity as Variety; containing many relations, whose Invention is as difficult as their Beliefs, and their Experiments sometime as hard as either.

13. We had almost forgot *Jeronymus Cardanus* that famous Physician of *Milan*, a great Enquirer of Truth, but too greedy a Receiver of it. He hath left many excellent Discourses, Medical, Natural, and Astrological; the most suspicious are those two he wrote by admonition in a dream, that is *De Subtilitate & Varietate Rerum*. Assuredly this learned man hath taken many things upon trust, and although he examined some, hath let slip many others. He is of singular use unto a prudent Reader; but unto him that only desireth Hoties, or to replenish his head with varieties; like many others before related, either in the Original or confirmation, he may become no small occasion of Error.

14. Lastly, Authors are also suspicious, not greedily to be swallowed, who pretend to write of Secrets, to deliver Antipathies, Sympathies, and the occult abstrusities of things; in the list whereof may be accounted, *Alex. Pedimontanus*, *Antonius Mizaldus*, *Trinum Magicum*, and many others. Not omitting that famous Philosopher of *Naples*, *Baptista Porta*; in whose Works, although there be contained many excellent things, and verified upon his own Experience; yet are there many also receptary, and such as will not endure the test. Who although he hath delivered many strange Relations in his Phytognomonica, and his Villa; yet hath he more remarkably expressed himself in his Natural Magick, and the miraculous effects of Nature. Which containing various and delectable subjects, withall promising wondrous and easie effects, they are entertained by Readers at all hands; whereof the major part sit down in his authority, and thereby omit not only the certainty of Truth, but the pleasure of its Experiment.

Thus have we made a brief enumeration of these Learned Men; not willing any to decline their Works (without which it is not easie to attain any measure of general Knowledge,) but to apply themselves with caution thereunto. And seeing the lapses of these worthy Pens, to cast a wary eye on those diminutive, and pamphlet Treaties daily published amongst us. Pieces maintaining rather Typography than Verity, Authors presumably writing by Common-Places, wherein for many years promiscuously amassing all that makes for their subject, they break forth at last in trite and fruitless Rhapsodies; doing thereby not only open injury unto Learning, but committing a secret treachery upon truth. For their relations falling upon credulous Readers, they meet with prepared beliefs; whose supinities had rather assent unto all, than adventure the trial of any.

Thus, I say, must these Authors be read, and thus must we be read our selves; for discoursing of matters dubious, and many controvertible truths; we cannot without arrogancy entreat a credulity, or implore any farther assent, than the probability of our Reasons, and verity of experiments induce.

CHAP. IX.

Of the ſame.

THere are beſide theſe Authors and ſuch as have poſitively promoted Errors, divers other which are in ſome way acceſſory; whoſe Verities, although they do not directly aſſert, yet do they obliquely concurr unto their beliefs. In which account are many holy Writers, Preachers, Moraliſts, Rhetoricians, Orators and Poets; for they depending upon Invention, deduce their *mediums* from all things whatſoever; and playing much upon the ſimile, or illuſtrative argumentation, to induce their Enthymemes unto the people, they take up popular conceits, and from Traditions unjuſtifiable or really falſe, illuſtrate matters of undenyable truth. Wherein although their intention be ſincere, and that courſe not much condemnable; yet doth it notoriouſly ſtrengthen common Errors, and authoriſe Opinions injurious unto truth.

Thus have ſome Divines drawn into argument the Fable of the *Phœnix*, made uſe of that of the *Salamander*, *Pelican*, *Baſilisk*, and divers relations of *Pliny*; deducing from thence moſt worthy Morals, and even upon our Saviour. Now although this be not prejudicial unto wiſer Judgements, who are but weakly moved with ſuch arguments, yet is it oft-times occaſion of Error unto vulgar heads, who expect in the Fable as equal a truth as in the Moral, and conceive that infallible Philoſophy, which is in any ſenſe delivered by Divinity. But wiſer diſcerners do well underſtand, that every Art hath its own circle; that the effects of things are beſt examined, by Sciences wherein are delivered their cauſes; that ſtrict and definitive expreſſions are alway required in Philoſophy, but a looſe and popular delivery will ſerve oftentimes in Divinity. As may be obſerved even in holy Scripture, which often omitteth the exact account of things; deſcribing them rather to our apprehenſions, than leaving doubts in vulgar minds, upon their unknown and Philoſophical deſcriptions. Thus it termeth the Sun and the Moon, the two great Lights of Heaven. Now if any ſhall from hence conclude, the Moon is ſecond in magnitude unto the Sun, he muſt excuſe my belief; and it cannot be ſtrange, if herein I rather adhere unto the demonſtration of *Ptolomy*, than the popular deſcription of *Moſes*. Thus it is ſaid, 2 *Chron.* 4. 2. That *Solomon* made a Molten Sea of ten Cubits from brim to brim round in compaſs, and five Cubits the height thereof, and a Line of thirty Cubits did compaſs it round about. Now in this deſcription, the circumference is made juſt treble unto the Diameter: that is, as 10. to 30. or 7. to 21. But *Archimedes* demonſtrates, that the proportion of the Diameter unto the Circumference, is as 7. unto almoſt 22. which will occaſion a ſenſible difference, that is almoſt a Cubit. Now if herein I adhere unto *Archimedes*, who ſpeaketh exactly, rather than the Sacred Text, which ſpeaketh largely; I hope I ſhall not offend Divinity: I am ſure I ſhall have Reaſon and Experience of every Circle to ſupport me.

Expreſſions of holy Scripture fitted many times rather to popular and common apprehenſion, than to the exact Nature of things.

In his Cyclometria.

Thus Moral Writers, Rhetoricians and Orators make uſe of ſeveral relations, which will not conſiſt with Verity. *Ariſtotle* in his Ethicks takes up the conceit of the *Bever*, and the divulſion of his Teſticles. The Tradition of the Bear, the Viper, and divers others are frequent amongſt Orators. All which, although unto the illiterate and undiſcerning hearers, may ſeem a confirmation of their realities; yet this is no reaſonable eſtabliſhment unto others, who will not depend hereon, otherwiſe than on common Apologues: which being of impoſſible falſities, do notwithſtanding include wholſom Moralities, and ſuch as expiate the treſpaſs of their abſurdities.

The

The Hieroglyphical Doctrine of the *Ægyptians* (which in their four hundred years cohabitation some conjecture they learned from the *Hebrews*) hath much advanced many popular conceits. For using an Alphabet of things, and not of words, through the image and pictures thereof, they endeavoured to speak their hidden conceits in the Letters and Language of Nature. In pursuit whereof, although in many things, they exceeded not their true and real apprehensions; yet in some other, they either framing the story, or taking up the Tradition, conducible unto their intentions, obliquely confirmed many falsities; which as authentick and conceded Truths, did after pass unto the *Greeks*, from them unto other Nations, and are still retained by symbolical Writers, Emblematists, Heralds, and others. Whereof some are strictly maintained for Truths, as naturally making good their artificial representations; others symbolically intended, are literally received, and swallowed in the first sense, without all gust of the second. Whereby we pervert the profound and mysterious knowledge of *Egypt*; containing the Arcâna's of Greek Antiquities, the Key of many obscurities and ancient learning extant. Famous herein in former Ages were *Heraiscus*, *Cheremon* and *Epius*, especially *Orus Apollo Niliacus*: who lived in the reign of *Theodosius*, and in Ægyptian language left two Books of Hieroglyphicks, translated into Greek by *Philippus*, and a large collection of all made after by *Pierius*. But no man is likely to profound the Ocean of that Doctrine, beyond that eminent example of industrious Learning, *Kircherus*.

Painters who are the visible representers of things, and such as by the learned sense of the eye endeavour to inform the understanding, are not inculpable herein, who either describing Naturals as they are, or actions as they have been, have oftentimes erred in their delineations. Which being the Books that all can read, are fruitful advancers of these conceptions, especially in common and popular apprehensions: who being unable for farther enquiry, must rest in the draught and letter of their descriptions.

Lastly, Poets and Poetical Writers have in this point exceeded others, trimly advancing the Ægyptian notions of *Harpies*, *Phœnix*, *Gryphins*, and many more. Now however to make use of Fictions, Apologues, and Fables, be not unwarrantable, and the intent of these inventions might point at laudable ends; yet do they afford our junior capacities a frequent occasion of error, setling impressions in our tender memories, which our advanced judgments do generally neglect to expunge. This way the vain and idle fictions of the Gentiles did first insinuate into the heads of Christians; and thus are they continued even unto our days. Our first and literary apprehensions being commonly instructed in Authours which handle nothing else; wherewith our memories being stuffed, our inventions become pedantick, and cannot avoid their allusions; driving at these as at the highest elegancies, which are but the frigidities of wit, and become not the genius of manly ingenuities. It were therefore no loss like that of *Galen*'s Library, if these had found the same fate; and would in some way requite the neglect of solid Authors, if they were less pursued. For were a pregnant wit educated in ignorance hereof, receiving only impressions from realities; upon such solid foundations, it must surely raise more substantial superstructions, and fall upon very many excellent strains, which have been justled off by their intrusions.

CHAP. X.

Of the laſt and common Promoter of falſe Opinions, the endeavours of Satan.

BUT beſide the Infirmities of Humane Nature, the ſeed of Error within our ſelves, and the ſeveral wayes of deluſion from each other, there is an inviſible Agent, and ſecret promoter without us, whoſe activity is undiſcerned, and plays in the dark upon us; and that is the firſt contriver of Error, and profeſſed oppoſer of Truth, the Devil. For though permitted unto his proper principles, *Adam* perhaps would have ſinned without the ſuggeſtion of Satan: and from the tranſgreſſive infirmities of himſelf might have erred alone, as well as the Angels before him: And although there were no Devil at all, yet there is now in our Natures a confeſſed ſufficiency unto corruption, and the frailty of our own Oeconomy, were able to betray us out of Truth; yet wants there not another Agent, who taking advantage hereof, proceedeth to obſcure the diviner part, and efface all tract of its traduction. To attempt a particular of all his wiles, is too bold an Arithmetick for man: what moſt conſiderably concerneth his popular and practiſed wayes of deluſion, he firſt deceiveth mankind in five main points concerning God and himſelf.

The Devils method of propagating Error in the World.

And firſt his endeavours have ever been, and they ceaſe not yet to inſtil a belief in the mind of Man, there is no God at all. And this he principally endeavours to eſtabliſh in a direct and literal apprehenſion; that is, that there is no ſuch reality exiſtent, that the neceſſity of his Entity dependeth upon ours, and is but a Political Chimera; that the natural truth of God is an artificial erection of Man, and the Creator himſelf but a ſubtile invention of the Creature. Where he ſucceeds not thus high, he labours to introduce a ſecondary and deductive Atheiſm; that although men concede there is a God, yet ſhould they deny his Providence. And therefore aſſertions have flown about, that he intendeth only the care of the ſpecies or common natures, but letteth looſe the guard of individuals, and ſingle exiſtencies therein: that he looks not below the Moon, but hath deſigned the regiment of ſublunary affairs unto inferiour deputations. To promote which apprehenſions, or empuzzle their due conceptions, he caſteth in the notions of Fate, Deſtiny, Fortune, Chance, and Neceſſity; terms commonly miſconceived by vulgar heads, and their propriety ſometime perverted by the wiſeſt. Whereby extinguiſhing in minds the compenſation of Vertue and Vice, the hope and fear of Heaven and Hell; they comply in their actions unto the drift of his deluſions, and live like Creatures without the capacity of either.

Now hereby he not only undermineth the Baſe of Religion, and deſtroyeth the principle preambulous unto all belief; but puts upon us the remoteſt Error from Truth. For Atheiſm is the greateſt falſity, and to affirm there is no God, the higheſt lye in Nature. And therefore ſtrictly taken, ſome men will ſay his labour is in vain: For many there are, who cannot conceive there was ever any abſolute *Atheiſt*; or ſuch as could determine there was no God, without all check from himſelf, or contradiction from his other opinions. And therefore thoſe few ſo called by elder times, might be the beſt of *Pagans*; ſuffering that name rather in relation to the gods of the Gentiles, than the true Creator of all. A conceit that cannot befal his greateſt enemy, or him that would induce the ſame in us; who hath a ſenſible apprehenſion hereof, for he believeth with trembling. To ſpeak yet more ſtrictly and conformably unto ſome Opinions, no creature can wiſh thus much; nor can the Will which hath a power to run into

into velleities, and wiſhes of impoſſibilities, have any *utinam* of this. For to deſire there were no God, were plainly to unwiſh their own being; which muſt needs be annihilated in the ſubſtraction of that eſſence which ſubſtantially ſupporteth them, and reſtrains them from regreſſion into nothing. And if, as ſome contend, no creature can deſire his own annihilation, that Nothing is not appetible, and not to be at all, is worſe than to be in the miſerableſt condition of ſomething; the Devil himſelf could not embrace that motion, nor would the enemy of God be freed by ſuch a Redemption.

But coldly thriving in this deſign, as being repulſed, by the principles of humanity, and the dictates of that production, which cannot deny its original, he fetcheth a wider circle; and when he cannot make men conceive there is no God at all, he endeavours to make them believe there is not one, but many: wherein he hath been ſo ſucceſsful with common heads, that he hath led their belief thorow all the Works of Nature.

Now in this latter attempt, the ſubtilty of his circumvention, hath indirectly obtained the former. For although to opinion there be many gods, may ſeem an exceſs in Religion, and ſuch as cannot at all conſiſt with Atheiſm, yet doth it deductively and upon inference include the ſame; for Unity is the inſeparable and eſſential attribute of Deity; and if there be more than one God, it is no Atheiſm to ſay there is no God at all. And herein though *Socrates* only ſuffered, yet were *Plato* and *Ariſtotle* guilty of the ſame Truth; who demonſtratively underſtanding the ſimplicity of perfection, and the indiviſible condition of the firſt Cauſator, it was not in the power of Earth, or † Areopagy of Hell to work them from it. For holding an * Apodictical knowledge, and aſſured ſcience of its verity, to perſwade their apprehenſions unto a plurality of gods in the world, were to make *Euclide* believe there were more than one Center in a Circle, or one right Angle in a Triangle; which were indeed a fruitleſs attempt, and inferreth abſurdities beyond the evaſion of Hell. For though Mechanick and vulgar heads aſcend not unto ſuch comprehenſions, who live not commonly unto half the advantage of their principles; yet did they not eſcape the eye of wiſer *Minerva's*, and ſuch as made good the genealogie of *Jupiter's* brains: who although they had divers ſtiles for God, yet under many appellations acknowledged one divinity: rather conceiving thereby, the evidence or acts of his power in ſeveral ways and places, than a multiplication of Eſſence, or real diſtraction of unity in any one.

† Areopagus the ſevere Court of *Athens*.

* Demonſtrative.

Again, to render our errors more monſtrous (and what unto miracle ſets forth the patience of God,) he hath endeavoured to make the world believe, that he was God himſelf; and failing of his firſt attempt to be but like the higheſt in Heaven, he hath obtained with men to be the ſame on Earth. And hath accordingly aſſumed the annexes of Divinity, and the prerogatives of the Creator, drawing into practice the operation of miracles, and the preſcience of things to come. Thus hath he in a ſpecious way wrought cures upon the ſick: played over the wondrous acts of Prophets, and counterfeited many miracles of Chriſt and his Apoſtles. Thus hath he openly contended with God, and to this effect his inſolency was not aſhamed to play a ſolemn prize with *Moſes*; wherein although his performance were very ſpecious, and beyond the common apprehenſion of any power below a Deity; yet was it not ſuch as could make good his Omnipotency. For he was wholly confounded in the converſion of duſt into lice. An act Philoſophy can ſcarce deny to be above the power of Nature, nor upon a requiſite prediſpoſition beyond the efficacy of the Sun. Wherein notwithſtanding the head of the old Serpent was confeſſedly too weak for *Moſes's* hand, and the arm of his Magicians too ſhort for the finger of God.

Thus hath he alſo made men believe that he can raiſe the dead, that he hath the key of life and death, and a prerogative above that principle which makes no regreſſion from privations. The Stoicks that opinioned the ſouls of wiſe men dwelt about the Moon, and thoſe of fools wandred about the Earth, advantaged the conceit of this effect; wherein the Epicureans, who held that

that death was nothing, nor nothing after death, must contradict their principles to be deceived. Nor could the Pythagorean or such as maintained the transmigration of souls give easie admittance hereto: for holding that separated souls successively supplied other bodies, they could hardly allow the arising of souls from other worlds, which at the same time, they conceived conjoyned unto bodies in this. More inconsistent with these Opinions, is the Error of Christians, who holding the dead do rest in the Lord, do yet believe they are at the lure of the Devil; that he who is in bonds himself commandeth the fetters of the dead, and dwelling in the borromless lake, the blessed from *Abrahams* bosome, that can believe the real resurrection of *Samuel*: or that there is any thing but delusion in the practice of * Necromancy and popular raising of Ghosts.

The Authors opinion, touching Necromancy and apparitions of the spirits of men departed.

* Divination by the dead.

He hath moreover endeavoured the opinion of Deity, by the delusion of Dreams, and the discovery of things to come in sleep, above the prescience of our waked senses. In this expectation he perswaded the credulity of elder times to take up their lodging before his temple, in skins of their own sacrifices: till his reservedness had contrived answers, whose accomplishments were in his power, or not beyond his presagement. Which way although it hath pleased Almighty God, sometimes to reveal himself, yet was the proceeding very different. For the revelations of Heaven are conveyed by new impressions, and the immediate illumination of the soul; whereas the deceiving spirit, by concitation of humours, produceth his conceited phantasm, or by compounding the species already residing, doth make up words which mentally speak his intentions.

How the Devil works his pretended revelations or predictions.

But above all he most advanced his Deity in the solemn practice of Oracles, wherein in several parts of the World, he publickly professed his Divinity; but how short they flew of that spirit, whose omniscience they would resemble, their weakness sufficiently declared. What jugling there was therein, the Orator plainly confessed, who being good at the same game himself, could say that *Pythia* Philippised. Who can but laugh at the carriage of *Ammon* unto *Alexander*, who addressing unto him as a God, was made to believe he was a God himself? How openly did he betray his Indivinity unto *Crœsus*, who being ruined by his Amphibology, and expostulating with him for so ungrateful a deceit, received no higher answer than the excuse of his impotency upon the contradiction of fate, and the setled law of powers beyond his power to control! What more than sublunary directions, or such as might proceed from the Oracle of humane Reason, was in his advice unto the Spartans in the time of a great Plague; when for the cessation thereof, he wisht them to have recourse unto a Fawn, that is, in open terms, unto one *Nebrus*, a good Physician of those days? From no diviner a spirit came his reply unto *Caracalla*, who requiring a remedy for his Gout, received no other counsel than to refrain cold drink; which was but a dietetical caution, and such as without a journey unto *Æsculapius*, culinary prescription and kitchin Aphorisms might have afforded at home. Nor surely if any truth there were therein, of more than natural activity was his counsel unto *Democritus*; when for the Falling-sickness he commended the Maggot in a Goats head. For many things secret are true; sympathies and antipathies are safely authentick unto us, who ignorant of their causes may yet acknowledge their effects. Beside, being a natural Magician he may perform many acts in ways above our knowledge, though not transcending our natural power, when our knowledge shall direct it. Part hereof hath been discovered by himself, and some by humane indagation: which though magnified as fresh inventions unto us, are stale unto his cognition. I hardly believe he hath from elder times unknown the verticity of the Loadstone; surely his perspicacity discerned it to respect the North, when ours beheld it indeterminately. Many secrets there are in Nature of difficult discovery unto man, of easie knowledge unto Satan; Whereof some his vain glory cannot conceal, others his envy will not discover.

Demosthenes.

Nebrus, in Greek, a Fawn.

Again, Such is the mysterie of his delusion, that although he labour to make us believe that he is God, and supremest nature whatsoever, yet would he

he alſo perſwade our beliefs, that he is leſs than Angels or men; and his condition not only ſubjected unto rational powers, but the action of things which have no efficacy on our ſelves. Thus hath he inveigled no ſmall part of the world into a credulity of artificial Magick: That there is an Art, which without compact commandeth the powers of Hell; whence ſome have delivered the polity of Spirits, and left an account even to their Provincial Dominions: that they ſtand in awe of Charms, Spells, and Conjurations; that he is afraid of letters and characters, of notes and daſhes, which ſet together do ſignifie nothing, not only in the Dictionary of man, but the ſubtiler Vocabulary of Satan. That there is any power in *Bitumen*, Pitch, or Brimſtone, to purifie the air from his uncleanneſs; that any vertue there is in *Hypericon* to make good the name of * *Fuga Dæmonis*, any ſuch Magick as is aſcribed unto the Root *Baaras* by *Joſephus*, or *Cynoſpaſtus* by *Ælianus*, it is not eaſie to believe; nor is it naturally made out what is delivered of *Tobias*, that by the fume of a Fiſhes liver, he put to flight *Aſmodeus*. That they are afraid of the *pentangle of *Solomon*, though ſo ſet forth with the body of man, as to touch and point out the five places wherein our Saviour was wounded, I know not how to aſſent. If perhaps, he hath fled from holy Water, if he cares not to hear the ſound of * *Tetragrammaton*, if his eye delight not in the ſign of the Croſs; and that ſometimes he will ſeem to be charmed with words of holy Scripture, and to flie from the letter and dead verbality, who muſt only ſtart at the life and animated interiors thereof: It may be feared they are but *Parthian* flights, *Ambuſcado* retreats, and eluſory tergiverſations: whereby to confirm our credulities, he will comply with the opinion of ſuch powers, which in themſelves have no activities. Whereof having once begot in our minds an aſſured dependance, he makes us relie on powers which he but precariouſly obeys; and to deſert thoſe true and only charms, which Hell cannot withſtand.

* St. *Johns* wort, ſo called by Magicians.

* Three triangles interſected and made of five lines.

*Implying Jehovah, which in Hebrew conſiſteth of four letters.

Laſtly, To lead us farther into darkneſs, and quite to loſe us in this maze of Error, he would make men believe there is no ſuch creature as himſelf: and that he is not only ſubject unto inferiour creatures, but in the rank of nothing. Inſinuating into mens minds there is no Devil at all, and contriveth accordingly, many ways to conceal or indubitate his exiſtency. Wherein beſide that he annihilates the bleſſed Angels and Spirits in the rank of his Creation; he begets a ſecurity of himſelf, and a careleſs eye unto the laſt remunerations. And therefore hereto he inveigleth, not only *Sadducees* and ſuch as retain unto the Church of God: but is alſo content that *Epicurus*, *Democritus*, or any Heathen ſhould hold the ſame. And to this effect he maketh men believe that apparitions, and ſuch as confirm his exiſtence, are either deceptions of ſight, or melancholy depravements of phancy. Thus when he had not only appeared but ſpake unto *Brutus*; *Caſſius* the Epicurean was ready at hand to perſwade him, it was but a miſtake in his weary imagination, and that indeed there were no ſuch realities in nature. Thus he endeavours to propagate the unbelief of Witches, whoſe conceſſion infers his coexiſtency; by this means alſo he advanceth the opinion of total death, and ſtaggereth the immortality of the ſoul; for, ſuch as deny there are ſpirits ſubſiſtent without bodies, will with more difficulty affirm the ſeparated exiſtence of their own.

Now to induce and bring about theſe falſities, he hath laboured to deſtroy the evidence of Truth, that is, the revealed verity and written Word of God. To which intent he hath obtained with ſome to repudiate the Books of *Moſes*, others thoſe of the Prophets, and ſome both: to deny the Goſpel and authentick Hiſtories of Chriſt; to reject that of *John*, and to receive that of *Judas*; to diſallow all, and erect another of *Thomas*. And when neither their corruption by *Valentinus* and *Arrius*, their mutilation by *Marcion*, *Manes* and *Ebion*, could ſatisfie his deſign, he attempted the ruine and total deſtruction thereof; as he ſedulouſly endeavoured, by the power and ſubtilty of *Julian*, *Maximinus* and *Dioclesian*.

But the longevity of that piece, which hath ſo long eſcaped the common fate, and the providence of that Spirit which ever waketh over it, may at laſt

laſt diſcourage ſuch attempts; and if not make doubtful its Mortality, at leaſt indubitably declare this is a ſtone, too big for Satan's mouth, and a bit indeed Oblivion cannot ſwallow.

And thus how ſtrangely he poſſeſſeth us with Errors may clearly be obſerved, deluding us into contradictory and inconſiſtent falſities; whileſt he would make us believe, That there is no God. That there are many. That he himſelf is God. That he is leſs than Angels or Men. That he is nothing at all.

Nor hath he only by theſe wiles depraved the conception of the Creator, but with ſuch Riddles hath alſo entangled the Nature of our Redeemer. Some denying his Humanity, and that he was one of the Angels, as *Ebion*; that the Father and Son were but one perſon, as *Sabellius*. That his body was phantaſtical, as *Manes*, *Baſilides*, *Priſcillian*, *Jovinianus*; that he only paſſed through *Mary*, as *Eutyches* and *Valentinus*. Some denying his Divinity; that he was begotten of humane principles, and the ſeminal Son of *Joſeph*; as *Carpocras*, *Symmachus*, *Photinus*: that he was *Seth* the Son of *Adam*, as the *Sethians*; that he was leſs than Angels, as *Cerinthus*: that he was inferiour unto *Melchiſedec*, as *Theodotus*: that he was not God, but God dwelt in him, as *Nicolaus*: and ſome embroyling them both. So did they which converted the Trinity into a Quaternity, and affirmed two perſons in Chriſt, as *Paulus Samoſatenus*: that held he was a Man without a Soul, and that the Word performed that office in him, as *Apollinaris*: that he was both Son and Father, as *Montanus*: that *Jeſus* ſuffered, but Chriſt remained impatible, as *Cerinthus*. Thus he endeavours to entangle Truths: And when he cannot poſſibly deſtroy its ſubſtance, he cunningly confounds its apprehenſions; that from the inconſiſtent and contrary determinations thereof, conſectary impieties, and hopeful concluſions may ariſe, there's no ſuch thing at all.

CHAP. XI.

A further Illuſtration.

NOw although theſe ways of deluſions moſt Chriſtians have eſcaped, yet are there many other whereunto we are daily betrayed; and theſe we meet with in obvious occurrents of the world, wherein he induceth us to aſcribe effects unto cauſes of no cognation; and diſtorting the order and theory of cauſes perpendicular to their effects, he draws them aſide unto things whereto they run parallel, and in their proper motions would never meet together.

Thus doth he ſometime delude us in the conceits of Stars and Meteors, beſide their allowable actions aſcribing effects thereunto of independent cauſations. Thus hath he alſo made the ignorant ſort believe that natural effects immediately and commonly proceed from ſupernatural powers: and theſe he uſually derives from Heaven, his own principality the Air, and Meteors therein; which being of themſelves the effects of natural and created cauſes, and ſuch as upon a due conjunction of actives and paſſives, without a Miracle, muſt ariſe unto what they appear; are always looked on by ignorant ſpectators as ſupernatural ſpectacles, and made the cauſes or ſigns of moſt ſucceeding contingencies. To behold a Rainbow in the night, is no prodigy unto a Philoſopher. Than Eclipſes of Sun or Moon, nothing is more natural: Yet with what ſuperſtition they have been beheld ſince the Tragedy of *Nicias* and his Army, many examples declare.

True

True it is, and we will not deny, that although theſe being natural productions from ſecond and ſerled cauſes, we need not alway look upon them as the immediate hand of God, or of his miniſtring Spirits: yet do they ſometimes admit a reſpect therein; and even in their naturals, the indifferency of their exiſtencies contemporiſed unto our actions, admits a farther conſideration.

That two or three Suns or Moons appear in any mans life or reign, it is not worth the wonder. But that the ſame ſhould fall out at a remarkable time, or point of ſome deciſive action; that the contingency of its appearance ſhould be confirmed unto that time; that thoſe two ſhould make but one line in the Book of Fate, and ſtand together in the great Ephemerides of God; beſide the Philoſophical aſſignment of the cauſe, it may admit a Chriſtian apprehenſion in the ſignality.

But above all he deceiveth us when we aſcribe the effects of things unto evident and ſeeming cauſalities, which ariſe from the ſecret and undiſcerned action of himſelf. Thus hath he deluded many Nations in his Augurial and Extiſpicious Inventions, from caſual and uncontrived contingencies divining events ſucceeding. Which *Tuſcan* ſuperſtition ſeizing upon *Rome*, hath ſince poſſeſſed all *Europe*. When *Auguſtus* found two galls in his ſacrifice, the credulity of the City concluded a hope of peace with *Anthony*; and the conjunction of perſons in choler with each other. Becauſe *Brutus* and *Caſſius* met a Blackmore, and *Pompey* had on a dark or ſad-coloured garment at *Pharſalia*; theſe were preſages of their overthrow. Which notwithſtanding are ſcarce Rhetorical ſequels; concluding Metaphors from realities, and from conceptions metaphorical inferring realities again.

Now theſe divinations concerning events, being in his power to force, contrive, prevent, or further, they muſt generally fall out conformably unto his predictions. When *Graceus* was ſlain, the ſame day the Chickens refuſed to come out of the Coop: and *Claudius Pulcher* underwent the like ſucceſs, when he contemned the Tripudiary Augurations: They died not becauſe the Pullets would not feed; but becauſe the Devil foreſaw their death, he contrived that abſtinence in them. So was there no natural dependence of the event upon the ſign, but an artificial contrivance of the ſign unto the event. An unexpected way of deluſion, and whereby he more eaſily led away the incircumſpection of their belief. Which fallacy he might excellently have acted before the death of *Saul*; for that being within his power to foretell, was not beyond his ability to foreſhew: and might have contrived ſigns thereof through all the creatures, which viſibly confirmed by the event, had proved authentick unto thoſe times, and advanced the Art ever after.

The danger and deluſion that is in cures by Charms, Amulets, Ligatures, Characters, &c.

He deludeth us alſo by Philters, Ligatures, Charms, ungrounded Amulets, Characters, and many ſuperſtitious ways in the cure of common diſeaſes: ſeconding herein the expectation of men with events of his own contriving, Which while ſome unwilling to fall directly upon Magick, impute unto the power of imagination, or the efficacy of hidden cauſes, he obtains a bloody advantage: for thereby he begets not only a falſe opinion, but ſuch as leadeth the open way to deſtruction. In maladies admitting natural reliefs, making men rely on remedies, neither of real operation in themſelves, nor more than ſeeming efficacy in his concurrence. Which whenſoever he pleaſeth to withdraw, they ſtand naked unto the miſchief of their diſeaſes; and revenge the contempt of the medicines of the Earth which God hath created for them. And therefore when neither miracle is expected, nor connection of cauſe unto effect from natural grounds concluded; however it be ſometime ſucceſsful, it cannot be ſafe to rely on ſuch practices, and deſert the known and authentick proviſions of God. In which rank of remedies, if nothing in our knowledge or their proper power be able to relieve us, we muſt with patience ſubmit unto that reſtraint, and expect the will of the Reſtrainer.

Now in these effects although he seem oft-times to imitate, yet doth he concur unto their productions in a different way from that spirit which sometime in natural means produceth effects above Nature. For whether he worketh by causes which have relation or none unto the effect, he maketh it out by secret and undiscerned ways of Nature. So when *Caius* the blind, in the Reign of *Antoninus*, was commanded to pass from the right side of the Altar unto the left, to lay five fingers of one hand thereon, and five of the other upon his eyes; although the Cure succeeded, and all the people wondered, there was not any thing in the action which did produce it, nor any thing in his power that could enable it thereunto. So for the same infirmity, when *Aper* was counselled by him to make a Collyrium or ocular medicine with the blood of a white Cock and Honey, and apply it to his eyes for three days: When *Julian* for his spitting of blood, was cured by Honey and Pine-Nuts taken from his Altar: When *Lucius* for the pain in his side, applied thereto the ashes from his Altar with Wine; although the remedies were somewhat rational, and not without a natural vertue unto such intentions, yet need we not believe that by their proper faculties they produced these effects.

But the effects of powers Divine flow from another operation; who either proceeding by visible means or not, unto visible effects, is able to conjoin them by his co-operation. And therefore those sensible ways which seem of indifferent natures, are not idle ceremonies, but may be causes by his command, and arise unto productions beyond their regular activities. If *Naaman* the Syrian had washed in *Jordan* without the command of the Prophet, I believe he had been cleansed by them no more than by the Waters of *Damnascus*. I doubt if any beside *Elisha* had cast in Salt, the waters of *Jericho* had not been made wholsome. I know that a decoction of wild gourd or Colocynthis (though somewhat qualified) will not from every hand be dulcified unto aliment by an addition of flowre or meal. There was some natural vertue in the Plaster of Figs applied unto *Ezechias*; we find that Gall is very mundificative, and was a proper medicine to clear the eyes of *Tobit*: which carrying in themselves some action of their own, they were additionally promoted by that power, which can extend their natures unto the production of effects beyond their created efficiencies. And thus may he operate also from causes of no power unto their visible effects; for he that hath determined their actions unto certain effects, hath not so emptied his own, but that he can make them effectual unto any other.

Again, Although his delusions run highest in points of practice, whose errors draw on offensive or penal enormities, yet doth he also deal in points of speculation, and things whose knowledge terminates in themselves. Whose cognition although it seems indifferent, and therefore its aberration directly to condemn no man; yet doth he hereby preparatively dispose us unto Errors, and deductively deject us into destructive Conclusions.

That the Sun, Moon, and Stars are living creatures, endued with soul and life, seems an innocent Error, and an harmless digression from truth; yet hereby he confirmed their Idolatry, and made it more plausibly embraced. For wisely mistrusting, that reasonable spirits would never firmly be lost in the adorement of things inanimate, and in the lowest form of Nature; he begat an opinion that they were living creatures, and could not decay for ever.

That spirits are corporeal, seems at first view a conceit derogative unto himself, and such as he should rather labour to overthrow; yet hereby he establisheth the Doctrine of Lustrations, Amulets and Charms, as we have declared before.

That there are two principles of all things, one good, and another evil; from the one proceeding vertue, love, light, and unity; from the other, division, discord, darkness, and deformity, was the speculation of *Pythagoras*, *Empedocles*, and many ancient Philosophers, and was no more than *Oromasdes* and *Arimanius* of *Zoroaster*. Yet hereby he obtained the advantage of Adoration, and as the terrible principle became more dreadful than his Maker; and therefore not willing to let it fall, he furthered the conceit in succeeding Ages, and raised the faction of *Manes* to maintain it.

That

That the feminine ſex have no generative emiſſion, affording no ſeminal Principles of conception; was *Ariſtotle*'s Opinion of old, maintained ſtill by ſome, and will be countenanced by him for ever. For hereby he diſparageth the fruit of the Virgin, fruſtrateth the fundamental Prophecy, nor can the ſeed of the Woman then break the head of the Serpent.

Nor doth he only ſport in ſpeculative Errors, which are of conſequent impieties; but the unquietneſs of his malice hunts after ſimple lapſes, and ſuch whoſe falſities do only condemn our underſtandings. Thus if *Xenophanes* will ſay there is another world in the Moon; If *Heraclitus* with his adherents will hold the Sun is no bigger than it appeareth; If *Anaxagoras* affirm that Snow is black; If any other opinion there are no *Antipodes*, or that Stars do fall, he ſhall not want herein the applauſe or advocacy of Satan. For maligning the tranquillity of truth, he delighteth to trouble its ſtreams; and being a profeſſed enemy unto God (who is truth it ſelf) he promoteh any Error as derogatory to his nature; and revengeth himſelf in every deformity from truth. If therefore at any time he ſpeak or practiſe truth, it is upon deſign, and a ſubtile inverſion of the precept of God, to do good that evil may come of it. And therefore ſometime we meet with wholſome doctrines from Hell; *Noſce teipſum*, the Motto of *Delphos* was a good precept in morality; That a juſt man is beloved of the gods, an uncontrolable verity. 'Twas a good deed, though not well done, which he wrought by *Veſpaſian*, when by the touch of his foot he reſtored a lame man, and by the ſtroak of his hand another that was blind, but the intention hereof drived at his own advantage; for hereby he not only confirmed the opinion of his power with the people, but his integrity with Princes; in whoſe power he knew it lay to overthrow his Oracles, and ſilence the practice of his deluſions.

But of ſuch a diffuſed nature, and ſo large is the Empire of Truth, that it hath place within the walls of Hell, and the Devils themſelves are daily forced to practiſe it; not only as being true themſelves in a Metaphyſical verity, that is, as having their eſſence conformable unto the Intellect of their Maker, but making uſe of Moral and Logical verities; that is, whether in the conformity of words unto things, or things unto their own conceptions, they practiſe truth in common among themſelves. For although without ſpeech they intuitively conceive each other, yet do their apprehenſions proceed through realities; and they conceive each other by ſpecies, which carry the true and proper notions of things conceived. And ſo alſo in Moral verities, although they deceive us, they lie unto each other; as well underſtanding that all community is continued by Truth, and that of Hell cannot conſiſt without it.

How ſpirits underſtand one another.

To come yet nearer the point, and draw into a ſharper angle; They do not only ſpeak and practiſe truth but may be ſaid well-wiſhers hereunto, and in ſome ſenſe do really deſire its enlargement. For many things which in themſelves are falſe, they do deſire were true; He cannot but wiſh he were as he profeſſeth, that he had the knowledge of future events; were it in his power, the Jews ſhould be in the right, and the *Meſſias* yet to come. Could his deſires effect it, the opinion of *Ariſtotle* ſhould be true, the world ſhould have no end, but be as immortal as himſelf. For thereby he might evade the accompliſhment of thoſe afflictions he now but gradually endureth; for comparatively unto thoſe flames, he is but yet in *Balneo*, then begins his *Ignis Rotæ*, and terrible fire, which will determine his diſputed ſubtilty, and even hazard his immortality.

But to ſpeak ſtrictly, he is in theſe wiſhes no promoter of verity, but if conſidered, ſome ways injurious unto truth; for (beſides that if things were true, which now are falſe, it were but an exchange of their natures, and things muſt then be falſe, which now are true) the ſetled and determined order of the world would be perverted, and that courſe of things diſturbed, which ſeemed beſt unto the immutable contriver. For whileſt they murmur againſt the preſent diſpoſure of things, regulating determined realities unto their private optations, they reſt not in their eſtabliſhed natures; but unwiſhing

How the Devils fell.

wiſhing their unalterable verities, do tacitely deſire in them a diſformity from the primitive Rule, and the Idea of that mind that formed all things beſt. And thus he offended truth even in his firſt attempt; For not content with his created nature, and thinking it too low, to be the higheſt creature of God, he offended the Ordainer, not only in the attempt, but in the wiſh and ſimple volition thereof.

THE

THE SECOND BOOK.

Of ſundry Popular Tenents concerning Mineral, and Vegetable Bodies, generally held for Truth; which examined, prove either falſe, or dubious.

CHAP. I.

Of Cryſtal.

HEREOF the common Opinion hath been, and ſtill remaineth amongſt us, that Cryſtal is nothing elſe but Ice or Snow concreted, and by duration of time, congealed beyond liquation. Of which aſſertion, if preſcription of time, and numeroſity of Aſſertors, were a ſufficient demonſtration, we might ſit down herein, as an unqueſtionable truth; nor ſhould there need *ulterior* diſquiſition. For few Opinions there are which have found ſo many friends, or been ſo popularly received, through all Profeſſions and Ages. *Pliny* is poſitive in this Opinion: *Cryſtallus fit gelu vehementius concreto*: the ſame is followed by *Seneca*, elegantly deſcribed by *Claudian*, not denyed by *Scaliger*, ſome way affirmed by *Albertus*, *Braſſavolus*, and directly by many others. The Venerable Fathers of the Church have alſo aſſented hereto; as *Baſil* in his *Hexameron*, *Iſidore* in his Etymologies, and not only *Auſtin* a Latine Father, but *Gregory* the Great, and *Jerom* upon occaſion of that term expreſſed in the firſt of *Ezekiel*.

That Cryſtal is not Ice of Snow congealed.

All which notwithſtanding, upon a ſtrict enquiry, we find the matter controvertible, and with much more reaſon denyed, than is as yet affirmed. For though many have paſſed it over with eaſie affirmatives, yet are there alſo many Authors that deny it, and the exacteſt Mineralogiſts have rejected it. *Diodorus* in his eleventh Book denyeth it, (if Cryſtal be there taken in its proper acception, as *Rhodiginus* hath uſed it, and not for a Diamond, as *Salmaſius* hath expounded it) for in that place he affirmeth; *Cryſtallum eſſe lapidem*

lapidem ex aqua pura concretum, non tamen frigore ſed divini caloris vi. Solinus, who tranſcribed *Pliny*, and therefore in almoſt all ſubſcribed unto him, hath in this point diſſented from him. *Putant quidam glaciem coire, & in Cryſtallum corporari, ſed fruſtra. Matthiolus* in his Comment upon *Dioſcorides*, hath with confidence rejected it. The ſame hath been performed by *Agricola de natura foſſilium*; by *Cardan*, *Boëtius de Boot*, *Caſius Bernardus*, *Sennertus*, and many more.

Now beſides Authority againſt it, there may be many reaſons deduced from their ſeveral differences which ſeem to overthrow it. And firſt a difference is probable in their *concretion*. For if Cryſtal be a ſtone (as in the number thereof it is confeſſedly received,) it is not immediately concreted by the efficacy of cold, but rather by a Mineral ſpirit, and lapidifical principles of its own; and therefore while it lay *in ſolutis principiis*, and remained in a fluid Body, it was a ſubject very unapt for proper conglaciation; for Mineral ſpirits do generally reſiſt, and ſcarce ſubmit thereto. So we obſerve that many waters and ſprings will never freez, and many parts in Rivers and Lakes, where there are Mineral eruptions, will ſtill perſiſt without congelation; as we alſo obſerve in *Aqua fortis*, or any Mineral ſolution, either of Vitriol, Alum, Salt-petre, Ammoniac, or Tartar, which although to ſome degree exhaled, and placed in cold Conſervatories, will Cryſtallize and ſhoot into white and glacious bodies; yet is not this a congelation primarily effected by cold, but an intrinſecal induration from themſelves; and a retreat into their proper ſolidities, which were abſorbed by the liquor, and loſt in a full imbibition thereof before. And ſo alſo when wood and many other bodies do petrifie, either by the Sea, other waters or earths abounding in ſuch ſpirits; we do not uſually aſcribe their induration to cold, but rather unto ſalinous ſpirits, concretive juices, and cauſes circumjacent, which do aſſimilate all bodies not indiſpoſed for their impreſſions.

But Ice is water congealed by the frigidity of the air, whereby it acquireth no few form, but rather a conſiſtence or determination of its diffluency, and amitteth not its eſſence, but condition of fluidity Neither doth there any thing properly conglaciate but water, or watery humidity; for the determination of quick-ſilver is properly fixation, that of milk coagulation, and that of oyl and unctious bodies, only incraſſation; And therefore *Ariſtotle* makes a trial of the fertility of humane ſeed, from the experiment of congelation; for that (ſaith he) which is not watery and improlifical will not conglaciate; which perhaps muſt not be taken ſtrictly, but in the germ and ſpirited particles: for Eggs I obſerve will freez, in the albugineous part thereof. And upon this ground *Paracelſus* in his Archidoxis, extracteth the magiſtery of wine; after four months digeſtion in horſe-dung, expoſing it unto the extremity of cold; whereby the aqueous parts will freez, but the Spirit retire and be found uncongealed in the Center.

How to make Ice at any time of the year.

But whether this congelation be ſimply made by cold, or alſo by co-operation of any nitrous coagulum, or ſpirit of Salt the principle of congretion; whereby we obſerve that Ice may be made with Salt and Snow by the fire ſide; as is alſo obſervable from Ice made by Salt-petre and water, duly mixed and ſtrongly agitated at any time of the year, were a very conſiderable inquiry. For thereby we might clear the generation of Snow, Hail, and hoary Froſts, the piercing qualities of ſome winds, the coldneſs of Caverns, and ſome Cells. We might more ſenſibly conceive how Salt-petre fixeth the flying ſpirits of Minerals in Chimical Preparations, and how by this congealing quality it becomes an uſeful medicine in Fevers.

Again, The difference of their concretion is collectible from their diſſolution which being many ways performable in Ice, is few ways effected in Cryſtal. Now the cauſes of liquation are contrary to thoſe of concretion; and as the Atoms and indiviſible parcels are united, ſo are they in an oppoſite way disjoyned. That which is concreted by exſiccation; or expreſſion of humidity, will be reſolved by humectation, as Earth, Dirt, and Clay; that which is coagulated by a fiery ſiccity, will ſuffer colliquation from an aqueous humidity, as Salt and Sugar, which are eaſily diſſoluble in water, but not

without

without difficulty in oyl, and well rectified ſpirits of Wine. That which is concreted by cold, will diſſolve by a moiſt heat, if it conſiſt of watery parts, as Gums, Arabick, Tragacanth, Ammoniac and others; in an airy heat or oyl, as all reſinous bodies, Turpentine, Pitch, and Frankincenſe; in both as gummy reſinous bodies, Maſtick, Camphire and Storax; in neither, as neutrals and bodies anomalous hereto, as Bdellium, Myrrhe, and others. Some by a violent dry heat, as Metals; which although corrodible by waters, yet will they not ſuffer a liquation from the powerfulleſt heat, communicable unto that Element. Some will diſſolve by this heat, although their ingredients be earthy, as Glaſs, whoſe materials are fine Sand, and the aſhes of Chali or Fearn; and ſo will Salt run with fire, although it be concreted by heat. And this way may be effected a liquation in Cryſtal, but not without ſome difficulty; that is, calcination or reducing it by Art into a ſubtle powder, by which way and a vitreous commixture, Glaſſes are ſometime made hereof, and it becomes the chiefeſt ground for artificial and factitious gemms. But the ſame way of ſolution is common alſo unto many Stones; and not only Beryls and Cornelians, but Flints and Pebbles, are ſubject unto fuſion, and will run like Glaſs in fire.

The original ingredients of Glaſs.

But Ice will diſſolve in any way of heat, for it will diſſolve with fire, it will colliquate in water, or warm oyl, nor doth it only ſubmit unto an actual heat, but not endure the potential calidity of many waters. For it will preſently diſſolve in cold *Aqua fortis*, ſp. of Vitriol, Salt or Tartar, nor will it long continue its fixation in Spirits of Wine, as may be obſerved in Ice injected therein.

Again, The concretion of Ice will not endure a dry attrition without liquation; for if it be rubbed long with a cloth, it melteth. But Cryſtal will calefie unto electricity, that is, a power to attract ſtraws or light bodies, and convert the needle freely placed. Which is a declarement of very different parts, wherein we ſhall not inlarge, as having diſcourſed concerning ſuch bodies in the Chap. of Electricks.

They are differenced by *ſupernatation* or floating upon water; for Cryſtal will ſink in water, as carrying in its own bulk a greater ponderoſity than the ſpace in any water it doth occupy; and will therefore only ſwim in molten Metal and Quickſilver. But Ice will ſwim in water of what thinneſs ſoever; and though it ſink in oyl, will float in ſpirits of Wine or *Aqua vitæ*. And therefore it may ſwim in water, not only as being water it ſelf, and in its proper place, but perhaps as weighing ſomewhat leſs than the water it poſſeſſeth. And therefore as it will not ſink unto the bottom, ſo will it neither float above like lighter bodies, but being near in weight, lie ſuperficially or almoſt horizontally unto it. And therefore alſo an Ice or congelation of Salt or Sugar, although it deſcend not unto the bottom, yet will it abate, and decline below the ſurface in thin water, but very ſenſibly in ſpirits of Wine. For Ice although it ſeemeth as tranſparent and compact as Cryſtal, yet is it ſhort in either; for its atoms are not concreted into continuity, which doth diminiſh its tranſluency; it is alſo full of ſpumes and bubbles, which may abate its gravity. And therefore waters frozen in Pans, and open Glaſſes, after their diſſolution do commonly leave a froth and ſpume upon them, which are cauſed by the airy parts diffuſed in the congealable mixture, which uniting themſelves, and finding no paſſage at the ſurface, do elevate the maſs, and make the liquor take up a greater place than before: as may be obſerved in Glaſſes filled with water, which being frozen, will ſeem to ſwell above the brim. So that if in this condenſation any one affirmeth there is alſo ſome rarefaction, experience may aſſert it.

They are diſtinguiſhed in *ſubſtance of Parts* and the accidents thereof, that is, in colour and figure; For Ice is a ſimilary body, and homogeneous concretion, whoſe material is properly water, and but accidentally exceeding the ſimplicity of that element. But the body of Cryſtal is mixed; its ingredients many, and ſenſibly containeth thoſe principles into which mixt bodies are reduced. For beſide the ſpirit and mercurial principle, it containeth a ſulphur or inflammable part, and that in no ſmall quantity; for beſides its

Electrick

Electrick attraction, which is made by a ſulphureous effluvium, it will ſtrike fire upon percuſſion like many other ſtones, and upon colliſion with Steel actively ſend forth its ſparks, not much inferiourly unto a Flint. Now ſuch bodies as ſtrike fire have ſulphureous or ignitible parts within them, and thoſe ſtrike beſt, which abound moſt in them. For theſe ſcintillations are not the accenſion of the air, upon the colliſion of two hard bodies, but rather the inflammable effluencies or vitrified ſparks diſcharged from the bodies collided. For Diamonds, Marbles, Heliotropes and Agaths, though hard bodies, will not readily ſtrike fire with a ſteel, much leſs with one another: Nor a Flint ſo readily with a Steel, if they both be very wet, for then the ſparks are ſometimes quenched in their eruption.

It containeth alſo a *Salt*, and that in ſome plenty, which may occaſion its fragility, as is alſo obſervable in Coral. This by the Art of Chymiſtry is ſeparable, unto the operations whereof it is liable, with other concretions, as calcination, reverberation, ſublimation, diſtillation: And in the preparation of Cryſtal, *Paracelſus* hath made a rule for that of Gemms. Briefly, it conſiſteth of parts ſo far from an Icie diſſolution, that powerful menſtruums are made for its emollition; whereby it may receive the tincture of Minerals, and ſo reſemble Gemms, as *Boëtius* hath declared in the diſtillation of Urine; ſpirits of Wine and Turpentine; and is not only triturable, and reducible into powder, by contrition, but will ſubſiſt in a violent fire, and endure a vitrification. Whereby are teſtified its earthy and fixed parts. For vitrification is the laſt work of fire, and a fuſion of the Salt and Earth, which are the fixed Elements of the compoſition, wherein the fuſible Salt draws the Earth and inſuſible part into one continuum, and therefore aſhes will not run from whence the Salt is drawn, as bone aſhes prepared for the Teſt of Metals. Common fuſion in Metals is alſo made by a violent heat, acting upon the volatile and fixed, the dry and humid parts of thoſe bodies; which notwithſtanding are ſo united, that upon attenuation from heat, the humid parts will not fly away, but draw the fixed ones into fluor with them. Ordinary liquation in wax and oily bodies is made by a gentler heat, where the oyl and ſalt, the fixed and fluid principles, will not eaſily ſeparate. All which, whether by vitrification, fuſion or liquation, being forced into fluent conſiſtencies, do naturally regreſs into their former ſolidities. Whereas the melting of Ice is a ſimple reſolution, or return from ſolid to fluid parts, wherein it naturally reſteth.

Paracelſus *de Præparationibus.*

The Phyſical cauſes of Liquation or melting of Metals, &c.

As for *colour*, although Cryſtal in its pellucid body ſeems to have none at all, yet in its reduction into powder, it hath a vail and ſhadow of blue; and in its courſer pieces, is of a ſadder hue than the powder of *Venice* glaſs and this complexion it will maintain although it long endure the fire. Which notwithſtanding needs not move us unto wonder; for vitrified and pellucid bodies, are of a clearer complexion in their continuities, than in their powders and Atomical diviſions. So *Stibium*, or glaſs of *Antimony*, appears ſomewhat red in glaſs, but in its powder yellow; ſo painted glaſs of a ſanguine red will not aſcend in powder above a murrey.

As for the *figure* of Cryſtal (which is very ſtrange, and forced *Pliny* to deſpair of reſolution) it is for the moſt part hexagonal or ſix cornered; being built upon a confuſed matter, from whence, as it were from a root, angular figures ariſe, even as in the Amethyſt and Baſaltes. Which regular figuration hath made ſome opinion, it hath not its determination from circumſcription, or as conforming unto contiguities, but rather from a ſeminal root, and formative principle of its own, even as we obſerve in ſeveral other concretions. So the ſtones which are ſometime found in the gall of a Man, are moſt triangular and pyramidal, although the figure of that part ſeems not to cooperate thereto. So the *Aſteria* or *lapis ſtellaris*, hath on it the figure of a Star; ſo *Lapis Judaicus* hath circular lines in length all down its body, and equidiſtant, as though they had been turned by Art. So, that we call a Fayrie ſtone, and is often found in *gravel pits* amongſt us, being of an hemiſpherical figure,

In Stone-pits and Chalk-mines.

Which ſeemeth to be Echinites decima Aldrovandi. *Muſæi Metallici lib.* 4. Rather Echinometrites, as beſt reſembling the Echinometra found commonly on our Sea-ſhore.

hath

hath five double lines ariſing from the center of its baſis, which if no accretion diſtract them, do commonly concur, and meet in the pole thereof. The figures are regular in many other ſtones, as in the Belemnites, *Lapis Anguinus*, *Cornu Ammonis*, and many more; as by thoſe which have not the experience hereof may be obſerved in their figures expreſſed by Mineralogiſts. But Ice receiveth its figure according unto the ſurface wherein it concreteth, or the circumambiency which conformeth it. So it is plain upon the ſurface of water, but round in Hail (which is alſo a glaciation) and figured in its guttulous deſcent from the air, and ſo growing greater or leſſer according unto the accretion or pluvious aggelation about the mother and fundamental Atomes thereof; which ſeems to be ſome feathery particle of Snow; although Snow it ſelf be ſexangular, or at leaſt of a ſtarry and many-pointed figure.

They are alſo differenced in the *places of their generation*; for though Cryſtal be found in cold Countreys, and where Ice remaineth long, and the Air exceedeth in cold, yet is it alſo found in Regions, where Ice is ſeldom ſeen or ſoon diſſolved; as *Pliny* and *Agricola* relate of *Cyprus*, *Caramania*, and an Iſland in the Red Sea: It hath been alſo found in the veins of Minerals, ſometimes agglutinated unto Lead, ſometimes in Rocks, opacous Stones, and the * Marble face of *Octavius* Duke of *Parma*. It hath alſo conſtant veins; as beſides others, that of Mount *Salvino* about the Territory of *Bergamo*; from whence if part be taken, in no long tract of time out of the ſame place, as from its Mineral Matrix, others are obſerved to ariſe. Which made the Learned *Cerutus* to conclude, *Videant hi an ſit glacies, an verò corpus foſſile.* It is alſo found ſometime in common earth. But as for Ice, it will not readily concrete but in the approachment of the Air, as we have made tryal in Glaſſes of Water, covered an inch with Oyl, which will not eaſily freeze in the hardeſt Froſts of our Climate. For Water commonly concreteth firſt in its ſurface, and ſo conglaciates downward; and ſo will it do although it be expoſed in the coldeſt Metal of Lead, which well accordeth with that expreſſion of *Job*, *The waters are hid as with a ſtone, and the face of the deep is frozen.* Chap. 38. But whether Water which hath been boiled or heated, doth ſooner receive this congelation, as commonly is delivered, we reſt in the experiment of *Cabeus*, who hath rejected the ſame in his excellent diſcourſe of Meteors.

* Wherein the Sculptor found a piece of pure Cryſtal.

They have contrary *qualities* Elemental, and *uſes* Medicinal; for Ice is cold and moiſt, of the quality of Water; but Cryſtal is cold and dry, according to the condition of earth. The uſe of Ice is condemned by moſt Phyſicians, that of Cryſtal commended by many. For although *Dioſcorides* and *Galen* have left no mention thereof, yet hath *Matthiolus*, *Agricola*, and many commended it in Dyſenteries and Fluxes; all for the increaſe of Milk, moſt Chymiſts for the Stone, and ſome, as *Braſſavolus* and *Boëtius*, as an Antidote againſt Poyſon. Which occult and ſpecifical operations are not expectable from Ice; for being but Water congealed, it can never make good ſuch qualities; nor will it reaſonably admit of ſecret proprieties, which are the affections of forms, and compoſitions at diſtance from their elements.

Having thus declared what Cryſtal is not, it may afford ſome ſatisfaction to manifeſt what it is. To deliver therefore what with the judgement of approved Authors, and beſt Reaſon conſiſteth, It is a Mineral body in the difference of Stones, and reduced by ſome unto that ſubdiviſion which comprehendeth Gemms, tranſparent and reſembling Glaſs or Ice, made of a lentous percolation of earth, drawn from the moſt pure and limpid juice thereof, owing unto the coldneſs of the earth ſome concurrence or coadjuvancy, but not immediate determination and efficiency, which are wrought by the hand of its concretive ſpirit, the ſeeds of petrification and Gorgon of it ſelf. As ſenſible Philoſophers conceive of the generation of Diamonds, Iris, Beryls. Not making them of frozen Icecles, or from meer aqueous and glaciable ſubſtances, condenſing them by froſts into ſolidities, vainly to be expected even from Polary congelations: but from thin and fineſt earths, ſo well contempered and reſolved, that tranſparency is not hindered; and containing

What Cryſtal is.

taining lapidifical ſpirits, able to make good their ſolidities againſt the oppoſition and activity of outward contraries, and ſo leave a ſenſible difference between the bonds of glaciation, which in the Mountains of Ice about the Northern Seas, are eaſily diſſolved by ordinary heat of the Sun, and between the finer ligatures of petrification, whereby not only the harder concretions of Diamonds and Saphirs, but the ſofter veins of Cryſtal remain indiſſolvable in ſcorching Territories, and the *Negro* Land of *Congor*.

And therefore I fear we commonly conſider ſubterraneities, not in contemplations ſufficiently reſpective unto the Creation. For though *Moſes* have left no mention of Minerals, nor made any other deſcription than ſuits unto the apparent and viſible Creation; yet is there unqueſtionably, a very large Claſſis of Creatures in the Earth, far above the condition of elementarity. And although not in a diſtinct and indiſputable way of vivency, or anſwering in all points the properties or affections of Plants; yet in inferiour and deſcending conſtitutions, they do like theſe contain ſpecifical diſtinctions, and are determined by ſeminalities, that is, created and defined ſeeds committed unto the Earth from the beginning. Wherein although they attain not the indubitable requiſites of Animation, yet have they a near affinity thereto. And though we want a proper name and expreſſive appellation, yet are they not to be cloſed up in the general name of concretions; or lightly paſſed over as only Elementary and Subterraneous mixtions.

The principal and moſt gemmary affection is its Tralucency: as for irradiancy or ſparkling which is found in many gemms, it is not diſcoverable in this, for it cometh ſhort of their compactneſs and durity: and therefore requireth not the Emery, as the Saphir, Granate, and Topaz, but will receive impreſſion from Steel, in a manner like the Turchois. As for its diaphanity or perſpicuity, it enjoyeth that moſt eminently; and the reaſon thereof is its continuity; as having its earthy and ſalinous parts ſo exactly reſolved, that its body is left imporous and not diſcreted by atomical terminations. For that continuity of parts is the cauſe of perſpicuity, is made perſpicuous by two ways of experiment. That is, either in effecting tranſparency in thoſe bodies which were not ſo before, or at leaſt far ſhort of the additional degree: So Snow becomes tranſparent upon liquation; ſo Horns and Bodies reſolvable into continued parts or gelly. The like is obſervable in oyled paper, wherein the interſtitial diviſions being continuated by the acceſſion of Oyl, it becometh more tranſparent, and admits the viſible rayes with leſs umbroſity. Or elſe the ſame is effected by rendring thoſe bodies opacous, which were before pellucid and perſpicuous. So Glaſs which was before diaphanous, being by powder reduced into multiplicity of ſuperficies, becomes an opacous body, and will not tranſmit the light. So it is in Cryſtal powdered, and ſo it is alſo before; for if be made hot in a Crucible, and preſently projected upon Water, it will grow dim, and abate its diaphanity; for the Water entering the body, begets a diviſion of parts, and a termination of Atoms united before unto continuity.

Exact continuity of parts a cauſe of tranſparency in things, and why.

The ground of this Opinion might be, firſt the concluſions of ſome men from experience; for as much as Cryſtal is found ſometimes in Rocks, and in ſome places not much unlike the ſtirious or ſtillicidious dependencies of Ice. Which notwithſtanding may happen either in places which have been forſaken or left bare by the earth, or may be petrifications, or Mineral indurations, like other Gemms, proceeding from percolations of the earth diſpoſed unto ſuch concretions.

The ſecond and moſt common ground is from the name *Cryſtallus*, whereby in *Greek* both Ice and Cryſtal are expreſſed; which many not duly conſidering, have from their community of name, conceived a community of nature; and what was aſcribed unto the one, not unfitly appliable unto the other. But this is a fallacy of Æquivocation, from a ſociety in name inferring an Identity in nature. By this fallacy was he deceived that drank *Aqua fortis* for Strong Water: By this are they deluded, who conceive *Sperma Ceti* which is found about the head, to be the ſpawn of the Whale: Or take

Sanguis

Sanguis Draconis (which is the Gumm of a Tree,) to be the Blood of a Dragon. By the same Logick we may inferr, the Crystalline humour of the Eye, or rather the Crystalline Heaven above, to be of the substance of Crystal here below; Or that God sendeth down Crystal, because it is delivered in the Vulgar Translation, Psal. 47. *Mittit Crystallum suum sicut Buccellas.* Which Translation, although it literally express the Septuagint; yet is there no more meant thereby, than what our Translation in plain *English* expresseth; that is, he casteth forth his Ice like morsels, or what *Tremellius* and *Junius* as clearly deliver, *Dejicit gelu suum sicut frusta, coram frigore ejus quis consistet?* which proper and Latine expressions, had they been observed in ancient Translations, elder Expositors had not been mis-guided by the Synonymy; nor had they afforded occasion unto *Austin*, the Gloss, *Lyranus*, and many others, to have taken up the common conceit, and spoke of this Text conformably unto the opinion rejected.

Agreement in Name.

CHAP. II.

Concerning the Loadstone.

Of things particularly spoken thereof, evidently or probably true. Of things generally believed, or particularly delivered, manifestly or probably false. In the first, of the Magnetical Vertue of the Earth, of the four Motions of the Stone, that is, its Verticity or Direction, its Attraction or Coition, its Declination, its Variation, and also of its Antiquity. In the second, a rejection of sundry opinions and relations thereof, Natural, Medical, Historical, Magical.

How the Earth is a Magnetical body.

AND first we conceive the Earth to be a Magnetical body. A Magnetical body, we term not only that which hath a power attractive, but that which seated in a convenient *medium*, naturally disposeth it self to one invariable and fixed situation. And such a Magnetical Vertue we conceive to be in the Globe of the Earth, whereby as unto its natural points and proper terms, it disposeth it self unto the Poles; being so framed, constituted, and ordered unto these points, that those parts which are now at the Poles, would not naturally abide under the Æquator, nor *Greenland* remain in the place of *Magellanica*. And if the whole Earth were violently removed, yet would it not forego its primitive points, nor pitch in the East or West, but return unto its Polary position again. For though by compactness or gravity it may acquire the lowest place, and become the center of the Universe; yet that it makes good that point, not varying at all by the accession of bodies upon, or secession thereof from its surface, perturbing the equilibration of either Hemisphere (whereby the altitude of the Stars might vary) or that it strictly maintains the North and Southern points; that neither upon the Motions of the Heavens, Air, and Winds without, large Eruptions and Division of parts within, its Polary parts should never incline or veer unto the Æquator (whereby the latitude of places should also vary) it cannot so well be salved from gravity as a Magnetical verticity. This is probably, that foundation the Wisdom of the Creator hath laid unto the Earth; in this sense we may more nearly apprehend, and sensibly

The foundation of the Earths stability.

Psalm 93. make out the expressions of holy Scripture, as *Firmavit orbem terræ qui non commovebitur*, he hath made the round World so sure, that it cannot be moved: as when it is said by *Job*, *Extendit Aquilonem super vacuo, &c.* He stretcheth forth the North upon the empty place, and hangeth the Earth upon nothing. And this is the most probable answer unto that great question, *Whereupon are the foundations of the Earth fastened, or who laid the corner-stone thereof?* Had they been acquainted with this principle, *Anaxagoras*, *Socrates*, and *Democritus*, had better made out the ground of this stability; *Xenophanes* had not been fain to say, the Earth had no bottom; and *Thales Milesius* to make it swim in Water.

Job 38.

The magnetical vertue of the Earth diffused *extra se* and communicated to bodies adjacent.

Nor is the vigour of this great body included only in it self, or circumferenced by its surface, but diffused at indeterminate distances through the Air, Water, and all Bodies circumjacent. Exciting and impregnating Magnetical bodies within its surface or without it, and performing in a secret and invisible way, what we evidently behold effected by the Loadstone. For these effluxions penetrate all bodies, and like the species of visible objects are ever ready in the *medium*, and lay hold on all bodies proportionate or capable of their action; those bodies likewise being of a congenerous nature, do readily receive the impressions of their Motor; and if not fettered by their gravity, conform themselves to situations, wherein they best unite unto their Animator. And this will sufficiently appear from the observations that are to follow, which can no better way be made out, than by this we speak of, the Magnetical vigour of the Earth. Now whether these effluviums do fly by striated Atoms and winding Particles, as *Renatus des Cartes* conceiveth; or glide by streams attracted from either Pole and Hemisphere of the Earth unto the Æquator, as Sir *Kenelm Digby* excellently declareth, it takes not away this vertue of the Earth; but more distinctly sets down the gests and progress thereof, and are conceits of eminent use to salve Magnetical **Phænomena's*. And as in Astronomy those **Hypotheses*, though never so strange, are best esteemed which best do salve apparencies; so surely in Philosophy those principles (though seeming monstrous) may with advantage be embraced, which best confirm experiment, and afford the readiest reason of observation. And truly the Doctrine of Effluxions, their penetrating natures, their invisible paths, and insuspected effects, are very considerable; for besides this Magnetical one of the Earth, several effusions there may be from divers other bodies, which invisibly act their parts at any time, and perhaps through any *medium*; a part of Philosophy but yet in discovery, and will, I fear, prove the last leaf to be turned over in the Book of Nature.

* Apparencies.
* Observations.

The Doctrine of effluxions acknowledg'd by the Author.

First therefore it is true, and confirmable by every experiment, that Steel and good Iron never excited by the Loadstone, discover in themselves a verticity; that is, a directive or polary faculty, whereby, conveniently placed, they do * Septentrionate at one extream, and † Australize at another. This is manifestable in long and thin plates of Steel perforated in the middle and equilibrated; or by an easier way in long wires equiponderate with untwisted Silk and soft Wax; for in this manner pendulous, they will conform themselves Meridionally, directing one extream unto the North, another to the South. The same is also manifest in Steel Wires thrust through little Spheres or Globes of Cork and floated on the Water, or in naked Needles gently let fall thereon; for so disposed they will not rest, until they have found out the Meridian, and as near as they can, lye parallel unto the Axis of the Earth: Sometimes the eye, sometimes the point Northward in divers Needles, but the same point always in most: Conforming themselves unto the whole Earth, in the same manner as they do unto every Loadstone. For if a Needle untouch'd be hanged above a Loadstone, it will convert into a parallel position thereto; for in this situation it can best receive its verticity, and be excited proportionably at both extreams. Now this direction proceeds not primitively from themselves, but is derivative and contracted from the Magnetical effluxions of the Earth; which they have winded in their hammering and formation; or else by long continuance in one position, as we shall declare hereafter.

* Point to the North.
† Point to the South.

It

It is likewiſe true what is delivered of Irons heated in the fire, that they contract a verticity in their refrigeration; for heated red hot and cooled in the Meridian from North to South, they preſently contract a polary power, and being poiſed in air or water, convert that part unto the North which reſpected that point in its refrigeration; ſo that if they had no ſenſible verticity before, it may be acquired by this way; or if they had any, it might be exchanged by contrary poſition in the cooling. For by the fire they omit not only many droſſie and ſcorious parts, but whatſoever they had received either from the Earth or Loadſtone; and ſo being naked and deſpoiled of all verticity, the Magnetical Atomes invade their bodies with more effect and agility.

Neither is it only true what *Gilbertus* firſt obſerved, that Irons refrigerated North and South acquire a Directive faculty; but if they be cooled upright and perpendicularly, they will alſo obtain the ſame. That part which is cooled toward the North on this ſide of the Æquator, converting it ſelf unto the North, and attracting the South point of the Needle: the other and higheſt extream reſpecting the South, and attracting the Northern, according unto the Laws Magnetical. For (what muſt be obſerved) contrary Poles or faces attract each other, as the North the South; and the like decline each other, as the North the North. Now on this ſide of the Equator, that extream which is next the Earth is animated unto the North, and the contrary unto the South, ſo that in coition it applies it ſelf quite oppoſitely, the coition or attraction being contrary to the Verticity or Direction. Contrary, if we ſpeak according unto common uſe; yet alike, if we conceive the vertue of the North Pole to diffuſe it ſelf and open at the South, and the South at the North again.

This polarity from refrigeration upon extremity and in defect of a Loadſtone, might ſerve to invigorate and touch a Needle any where; and this, allowing variation, is alſo the readieſt way at any ſeaſon to diſcover the North or South; and ſurely far more certain than what is affirmed of the grains and circles in trees, or the figure in the root of Fern. For if we erect a red hot wire until it cool, then hang it up with wax and untwiſted Silk, where the lower end and that which cooled next the earth doth reſt, that is the Northern point; and this we affirm will ſtill be true, whether it be cooled in the air or extinguiſhed in water, oyl of Vitriol, *Aqua fortis*, or Quickſilver. And this is alſo evidenced in culinary uteniſils and Irons that often feel the force of fire, as Tongs, Fire-ſhovels, Prongs, and Andirons; all which acquire a Magnetical and polary condition, and being ſuſpended, convert their lower extreams unto the North; with the ſame attracting the Southern point of the Needle. For eaſier experiment, if we place a Needle touched at the foot of Tongs or Andirons, it will obvert or turn aſide its Lillie or North point, and conform its cuſpis or South extream unto the Andiron. The like verticity though more obſcurely is alſo contracted by Bricks and Tiles, as we have made trial in ſome taken out of the backs of Chimneys. Now to contract this Direction, there needs not a total ignition, nor is it neceſſary the Irons ſhould be red hot all over. For if a wire be heated only at one end, according as that end is cooled upward or downward, it reſpectively acquires a verticity, as we have declared in wires totally candent. Nor is it abſolutely requiſite they ſhould be cooled perpendicularly, or ſtrictly lie in the Meridian; for whether they be refrigerated inclinatorily or ſomewhat Æquinoxially, that is toward the Eaſtern or Weſtern points; though in a leſſer degree, they diſcover ſome verticity.

Some conceive that the figure of the Tree or Spread-eagle in the root of Brake or Fern ſtands North and South, but not truly.

Nor is this only true in Irons, but in the Loadſtone it ſelf. For if a Loadſtone be made red hot, it loſeth the magnetical vigour it had before in it ſelf, and acquires another from the Earth in its refrigeration; for that part which cooleth toward the Earth will acquire the reſpect of the North, and attract the Southern point or cuſpis of the Needle. The experiment hereof we made in a Loadſtone of a parallelogram or long ſquare figure; wherein only inverting the extreams, as it came out of the fire, we altered the poles or faces thereof at pleaſure.

It is alſo true what is delivered of the Direction and coition of Irons, that they contract a verticity by long and continued poſition: that is, not only being placed from North to South, and lying in the Meridian, but reſpecting the *Zenith* and perpendicular unto the Center of the Earth; as is manifeſt in bars of windows, caſements, hinges and the like. For if we preſent the Needle unto their lower extreams, it wheels about and turns its Southern point unto them. The ſame condition in long time do Bricks contract which are placed in walls, and therefore it may be a fallible way to find out the Meridian by placing the Needle on a wall; for ſome Bricks therein by a long and continued poſition, are often magnetically enabled to diſtract the polarity of the Needle. And therefore thoſe Irons which are ſaid to have been converted into Loadſtones, whether they were real converſions, or onely attractive augmentations, might be much promoted by this poſition: as the Iron croſs of an hundred weight upon the Church of St *John* in *Ariminum*, or that Loadſton'd Iron of *Cæſar Moderatus*, ſet down by *Aldrovandus*.

De miner. l. 1.

Laſtly, Irons do manifeſt a verticity not only upon refrigeration and conſtant ſituation, but (what is wonderful, and advanceth the magnetical Hypotheſis) they evidence the ſame by meer poſition according as they are inverted, and their extreams diſpoſed reſpectively unto the Earth. For if an Iron or Steel not firmly excited, be held perpendicularly or inclinatorily unto the Needle, the lower end thereof will attract the *cuſpis* or Southern point; but if the ſame extream be inverted and held under the Needle, it will then attract the Lilly or Northern point; for by inverſion it changeth its direction acquired before, and receiveth a new and Southern polarity from the Earth, as being the upper extream. Now if an Iron be touched before, it varieth not in this manner; for then it admits not this magnetical impreſſion, as being already informed by the Loadſtone, and polarily determined by its preaction.

And from theſe grounds may we beſt determine why the Northern Pole of the Loadſtone attracteth a greater weight than the Southern on this ſide the Æquator; why the ſtone is beſt preſerved in a natural and polary ſituation; and why, as *Gilbertus* obſerveth, it reſpecteth that Pole out of the Earth, which it regarded in its Mineral bed and ſubterraneous poſition.

It is likewiſe true and wonderful what is delivered of the Inclination or Declination of the Loadſtone; that is, the deſcent of the Needle below the plain of the Horizon. For long Needles which ſtood before upon their *axis* parallel unto the Horizon, being vigorouſly excited, incline and bend downward, depreſſing the North extream below the Horizon. That is the North on this, the South on the other ſide of the Æquator; and at the very Line or middle circle ſtand without deflexion. And this is evidenced not only from obſervations of the Needle in ſeveral parts of the Earth, but ſundry experiments in any part thereof, as in a long Steel wire, equilibrated or evenly ballanced in the air; for excited by a vigorous Loadſtone, it will ſomewhat depreſs its animated extream, and interſect the horizontal circumference. It is alſo manifeſt in a Needle pierced through a Globe of Cork ſo cut away and pared by degrees, that it will ſwim under water, yet ſink not unto the bottom, which may be well effected; for if the Cork be a thought too light to ſink under the ſurface, the body of the water may be attenuated with ſpirits of wine; if too heavy, it may be incraſſated with ſalt; and if by chance too much be added, it may again be thinned by a proportionable addition of freſh water. If then the Needle be taken out, actively touched and put in again, it will depreſs and bow down its Northern head toward the botom, and advance its Southern extremity toward the brim. This way invented by *Gilbertus* may ſeem of difficulty; the ſame with leſs labour may be obſerved in a needled ſphere of Cork equally contiguous unto the ſurface of the water; for if the Needle be not exactly equiponderant, that end which is a thought too light, if touched becometh even; that Needle alſo which will but juſt ſwim under water, if forcibly touched will ſink deeper, and ſometime unto the bottom. If likewiſe that inclinatory vertue be deſtroyed by a touch from the contrary Pole, that end which before

was

was elevated will then decline, and this perhaps might be observed in some scales exactly ballanced, and in such Needles which for their bulk can hardly be supported by the water. For if they be powerfully excited and equally let fall, they commonly sink down and break the water at that extream whereat they were septentrionally excited: and by this way it is conceived there may be some fraud in the weighing of precious commodities, and such as carry a value in quarter-grains by placing a powerful Loadstone above or below, according as we intend to depress or elevate one extream.

Now if these Magnetical emissions be only qualities, and the gravity of bodies incline them only unto the earth; surely that which alone moveth other bodies to descent, carrieth not the stroak in this, but rather the Magnetical alliciency of the Earth; unto which with alacrity it applieth it self, and in the very same way unto the whole Earth, as it doth unto a single Loadstone. For if an untouched Needle be at a distance suspended over a Loadstone, it will not hang parallel, but decline at the North extream, and at that part will first salute its Director. Again what is also wonderful, this inclination is not invariable; for just under the line the Needle lieth parallel with the Horizon, but sailing North or South it beginneth to incline, and increaseth according as it approacheth unto either Pole; and would at last endeavour to erect it self. And this is no more than what it doth upon the Loadstone, and that more plainly upon the Terrella or spherical magnet Cosmographically set out with circles of the Globe. For at the Æquator thereof, the needle will stand rectangularly; but approaching Northward toward the Tropick it will regard the stone obliquely, and when it attaineth the Pole, directly; and if its bulk be no impediment, erect it self and stand perpendicularly thereon. And therefore upon strict observation of this inclination in several latitudes and due records preserved, instruments are made, whereby without the help of Sun or Star, the latitude of the place may be discovered; and yet it appears the observations of men have not as yet been so just and equal as is desireable; for of those Tables of declination which I have perused, there are not any two that punctually agree; though some have been thought exactly calculated, especially that which *Ridley* received from Mr. *Brigs*, in our time Geometry-Professor in *Oxford*.

It is also probable what is delivered concerning the variation of the Compass that is the cause and ground thereof; for the manner, as being confirmed by observation, we shall not at all dispute. The Variation of the Compass is an Arch of the Horizon intercepted between the true and Magnetical Meridian; or more plainly, a deflexion and siding East and West from the true Meridian. The true Meridian is a major Circle passing through the Poles of the World, and the Zenith or Vertex of any place, exactly dividing the East from the West. Now on this line the Needle exactly lieth not, but diverts and varieth its point, that is, the North point on this side the Æquator, the South on the other; sometimes unto the East, sometime toward the West, and in some few places varieth not at all. First, therefore it is observed that betwixt the Shore of *Ireland*, *France*, *Spain*, *Guiney*, and the *Azores*, the North point varieth toward the East, and that in some variety; at *London* it varieth eleven degrees, at *Antwerp* nine, at *Rome* but five: at some part of the *Azores* it deflecteth not, but lieth in the true Meridian; on the other side of the *Azores*, and this side of the Æquator, the North point of the Needle wheeleth to the West; so that in the Latitude of 36 near the shore, the variation is about eleven degrees; but on the other side the Æquator, it is quite otherwise: for about *Capo Frio* in *Brasilia*, the South point varieth twelve degrees unto the West, and about the mouth of the Straits of *Magellan* five or six; but elongating from the coast of *Brasilia* toward the shore of *Africa* it varieth Eastward, and arriving at *Capo de las Agullas*, it resteth in the Meridian, and looketh neither way.

What the Variation of the Compass is.

Now the cause of this variation was thought by *Gilbertus* to be the inequality of the Earth, variously disposed, and differently intermixed with the Sea: withal the different disposure of its Magnetical vigor in the eminencies and stronger parts thereof. For the Needle naturally endeavours to conform unto

The cause of the variation of the Compass.

unto the Meridian; but being distracted, driveth that way where the greater and powerfuller part of the Earth is placed. Which may be illustrated from what hath been delivered before, and may be conceived by any, that understands the generalities of Geography. For whereas on this side the Meridian, or the Isles of *Azores*, where the first Meridian is placed, the Needle varieth Eastward; it may be occasioned by that vast Tract of Earth, that is, of *Europe*, *Asia*, and *Africa*, seated toward the East, and disposing the Needle that way. For arriving at some part of the *Azores*, or Islands of Saint *Michael*, which have a middle situation between these Continents, and that vast and almost answerable Tract of *America*, it seemeth equally distracted by both; and diverting unto neither, doth parallel and place it self upon the true Meridian. But sailing farther, it veers its Lilly to the West, and regardeth that quarter wherein the Land is nearer or greater; and in the same latitude as it approacheth the shore, augmenteth its variation. And therefore as some observe, if *Columbus*, or whoever first discovered *America*, had apprehended the cause of this variation, having passed more than half the way, he might have been confirmed in the discovery, and assuredly foretold there lay a vast and mighty Continent toward the West. The reason I confess and inference is good, but the instance perhaps not so. For *Columbus* knew not the variation of the compass, whereof *Sebastian Cabot* first took notice, who after made discovery of the Northern part of that Continent. And it happened indeed that part of *America* was first discovered, which was on this side farthest distant, that is, *Jamaica*, *Cuba*, and the Isles in the Bay of *Mexico*. And from this variation do some new discoverers deduce a probability in the attempts of the Northern passage toward the *Indies*.

Now becaus where the greater Continents are joyned, the action and effluence is also greater; therefore those Needles do suffer the greatest variation which are in Countries which most do feel that action. And therefore hath *Rome* far less variation than *London*; for on the West side of *Rome* are seated the great Continents of *France*, *Spain*, *Germany*, which take off the exuperance, and in some way ballance the vigor of the Eastern parts. But unto *England* there is almost no Earth West, but the whole extent of *Europe* and *Asia* lieth Eastward; and therefore at *London* it varieth eleven degrees, that is, almost one *Rhemb*. Thus also by reason of the great Continent of *Brasilia*, *Peru*, and *Chili*, the Needle deflecteth toward the Land twelve degrees; but at the Straits of *Magellan* where the Land is narrowed, and the Sea on the other side, it varieth but five or six. And so likewise, becaus the Cape *de las Agullas* hath Sea on both sides near it, and other Land remote, and as it were æquidistant from it, therefore at that point the Needle conforms unto the true Meridian, and is not distracted by the vicinity of Adjacencies. This is the general and great cause of variation. But if in certain Creeks and Vallies the Needle prove irregular, and vary beyond expectation; it may be imputed unto some vigorous part of the Earth, or Magnetical eminence not far distant. And this was the invention of *D. Gilbert*, not many years past, a Physician in *London*. And therefore although some assume the invention of its direction, and other have had the glory of the Card; yet in the experiments, grounds, and causes thereof, *England* produced the Father Philosopher, and discovered more in it, than *Columbus* or *Americus* did ever by it.

Unto this in great part true, the reason of *Kircherus* may be added: That this variation proceedeth not only from terrestrious eminencies, and magnetical veins of the Earth, laterally respecting the Needle, but the different coagmentation of the Earth disposed unto the Poles, lying under the Sea and Waters, which affect the Needle with great or lesser variation, according to the vigour or imbecillity of these subterraneous lines, or the entire or broken compagination of the magnetical fabrick under it. As is observable from several Loadstones placed at the bottom of any water; for a Loadstone or Needle upon the surface, will variously conform it self, according to the vigour or faintness of the Loadstones under it.

Thus also a reason may be alledged for the variation of the Variation, and why, according to observation, the variation of the Needle hath after some years been found to vary in some places. For this may proceed

from

from mutations of the earth, by ſubterraneous fires, fumes, mineral ſpirits, or otherwiſe: which altering the conſtitution of the magnetical parts, in proceſs of time, doth vary the Variation over the place.

It is alſo probable what is conceived of its Antiquity, that the knowledge of its polary power and direction unto the North was unknown unto the Ancients; and though *Levinus Lemnius*, and *Celius Calcagninus*, are of another belief, is juſtly placed with new inventions by *Pancirollus*. For their *Achilles* and ſtrongeſt argument is an expreſſion in *Plautus*, a very ancient Author, and contemporary unto *Ennius*. *Hic ventus jam ſecundus eſt, cape modo verſoriam.* Now this *verſoriam* they conſtrue to be the Compaſs, which notwithſtanding according unto *Pineda*, who hath diſcuſſed the point, *Turnebus*, *Cabeus*, and divers others, is better interpreted the rope that helps to turn the Ship, or as we ſay, doth make it tack about; the Compaſs declaring rather the Ship is turned, than conferring unto its converſion. As for the long Expeditions and ſundry Voyages of elder times, which might confirm the Antiquity of this invention, it is not improbable they were performed by the help of Stars; and ſo might the Phœnicean Navigators, and alſo *Ulyſſes* ſail about the Mediterranean, by the flight of Birds, or keeping near the ſhore; and ſo might *Hanno* coaſt about *Africa*; or by the help of Oars, as is expreſſed in the voyage of *Jonah*. And whereas it is contended that this veriticy was not unknown unto *Solomon*, in whom is preſumed an univerſality of knowledge; it will as forcibly follow, he knew the Art of Typography, Powder, and Guns, or had the Philoſophers Stone, yet ſent unto *Ophir* for Gold. It is not to be denyed, that beſide his Political wiſdom, his knowledge in Philoſophy was very large; and perhaps from his Works therein, the ancient Philoſophers, eſpecially *Ariſtotle*, who had the aſſiſtance of *Alexander's* acquirements, collected great obſervables. Yet if he knew the uſe of the Compaſs, his Ships were ſurely very ſlow, that made a three years Voyage from *Eziongeber* in the red Sea unto *Ophir*; which is ſuppoſed to be *Taprobana* or *Malaca* in the *Indies*, not many months ſail; and ſince in the ſame or leſſer time, *Drake* and *Candiſh* performed their voyage about the Earth.

And as the knowledge of its verticity is not ſo old as ſome conceive, ſo is it more ancient than moſt believe; nor had its diſcovery with Guns, Printing, or as many think, ſome years before the diſcovery of *America*. For it was not unknown unto *Petrus Peregrinus* a Frenchman, who two hundred years ſince left a Tract of the Magnet, and a perpetual motion to be made thereby, preſerved by *Gaſſerus*. *Paulus Venetus*, and about five hundred years paſt, *Albertus Magnus* make mention hereof, and quote for it a Book of *Ariſtotle*, *De Lapide*; which Book although we find in the Catalogue of *Laertius*, yet with *Cabeus* we may rather judge it to be the work of ſome Arabick Writer, not many years before the days of *Albertus*.

Laſtly, It is likewiſe true what ſome have delivered of *Crocus Martis*, that is, Steel corroded with Vinegar, Sulphur, or otherwiſe, and after reverberated by fire. For the Loadſtone will not at all attract it, nor will it adhere, but lie therein like Sand. This is to be underſtood of *Crocus Martis* well reverberated, and into a Violet colour: for common *Chalybs præparatus*, or corroded and powdered Steel, the Loadſtone attracts like ordinary filings of Iron; and many times moſt of that which paſſeth for *Crocus Martis*. So that this way may ſerve as a taſt of its preparation; after which it becometh a very good medicine in fluxes. The like may be affirmed of flakes of Iron that are ruſty and begin to tend unto Earth; for their cognation then expireth, and the Loadſtone will not regard them.

And therefore this may ſerve as a trial of good Steel, the Loadſtone taking up a greater maſs of that which is moſt pure. It may alſo decide the converſion of Wood into Iron, as is pretended from ſome Waters: and the common converſion of Iron into Copper by the mediation of blew Coperoſe, for the Loadſtone will not attract it. Although it may be queſtioned, whether in this operation, the Iron or Coperoſe be tranſmuted, as may be doubted from the cognation of Coperoſe with Copper, and the quantity of Iron

remaining after the converſion. And the ſame may be uſeful to ſome diſcovery concerning Vitriol or Coperoſe of *Mars*, by ſome called Salt of Steel, made by the ſpirits of Vitriol or Sulphur. For the corroded Powder of Steel will after ablution be actively attracted by the Loadſtone, and alſo remaineth in little diminiſhed quantity. And therefore whether thoſe ſhooting Salts partake but little of Steel, and be not rather the vitriolous ſpirits fixed into Salt by the effluvium or odor of Steel, is not without good queſtion.

CHAP. III.

Concerning the Loadſtone; therein of ſundry common Opinions, and ſeveral received relations, Natural, Hiſtorical, Medical, Magical.

AND firſt not only a ſimple Heterodox, but a very hard Paradox, it will ſeem, and of great abſurdity unto obſtinate ears, if we ſay, Attraction is unjuſtly appropriated unto the Loadſtone, and that perhaps we ſpeak not properly, when we ſay vulgarly and appropriately, The Loadſtone draweth Iron; and yet herein we ſhould not want experiment and great Authority. The words of *Renatus des Cartes* in his Principles of Philoſophy are very plain. *Præterea magnes trahit ferrum, ſive potiùs magnes & ferrum ad invicem accedunt, neque enim ulla ibi tractio eſt.* The ſame is ſolemnly determined by *Cabeus*. *Nec magnes trahit propriè ferrum, nec ferrum ad ſe magnetem provocat; ſed ambo pari conatu ad invicem confluunt.* Concordant hereto is the aſſertion of Doctor *Ridley*, Phyſician to the Emperour of *Ruſſia*, in his Tract of Magnetical Bodies, defining Magnetical attraction to be a natural incitation and diſpoſition conforming unto contiguity, an union of one Magnetical Body with another, and no violent haling of the weak unto the ſtronger. And this is alſo the Doctrine of *Gilbertus*, by whom this motion is termed Coition, and that not made by any faculty attractive of one, but a *Syndrome* and concourſe of each; a Coition alway ſof their vigours, and alſo of their bodies, if bulk or impediment prevent not. And therefore thoſe contrary actions which flow from oppoſite Poles or Faces, are not ſo properly expulſion and attraction, as *Sequela* and *Fuga*, a mutual flight and following. Conſonant whereto are alſo the determinations of *Helmontius*, *Kircherus*, and *Licetus*.

Attraction reciprocal betwixt the Loadſtone and Iron.

The ſame is alſo confirmed by experiment; for if a piece of Iron be faſtened in the ſide of a Bowl or Baſon of Water, a Loadſtone ſwimming freely in a Boat of Cork, will preſently make unto it. So if a Steel or Knife untouched, be offered toward the Needle that is touched, the Needle nimbly moveth toward it, and conformeth unto an union with the Steel that moveth not. Again, If a Loadſtone be finely filed, the Atoms or duſt thereof will adhere unto Iron that was never touched, even as the powder of Iron doth alſo unto the Loadſtone. And laſtly, if in two Skiffs of Cork, a Loadſtone and Steel be placed within the Orb of their activities, the one doth not move, the other ſtanding ſtill, but both hoiſe ſail and ſteer unto each other. So that if the Loadſtone attract, the Steel hath alſo its attraction; for in this action the Alliciency is reciprocal, which joyntly felt, they mutually approach and run into each others arms.

And therefore ſurely more moderate expreſſions become this action, than what the Ancients have uſed; which ſome have delivered in the moſt violent terms of their language; ſo *Auſtin* calls it, *Mirabilem ferri raptorem: Hippocrates*, λίθος ὅτι τὸν σίδηρον ἁρπάζει, *Lapis qui ferrum rapit. Galen* diſputing againſt *Epicurus*, uſeth the term ἕλκειν, but this alſo is too violent: among the Ancients *Ariſtotle* ſpake moſt warily, λίθος ὅτις τὸν σίδηρον κινεῖ, *Lapis qui*

qui ferrum movet: and in ſome tolerable acception do run the expreſſions of *Aquinas*, *Scaliger* and *Cuſanus*.

Many relations are made, and great expectations are raiſed from the *Magnes Carneus*, or a Loadſtone that hath a faculty to attract not only Iron, but Fleſh; but this upon enquiry, and as *Cabeus* hath alſo obſerved, is nothing elſe but a weak and inanimate kind of Loadſtone, veined here and there with a few magnetical and ferreous lines; but chiefly conſiſting of a bolary and clammy ſubſtance, whereby it adheres like *Hæmatites* or *Terra Lemnia*, unto the Lips. And this is that ſtone which is to be underſtood, when Phyſicians joyn it with *Ætites*, or the Eagle-ſtone, and promiſe therein a vertue againſt abortion.

There is ſometime a miſtake concerning the variation of the Compaſs, and therein one point is taken for another. For beyond the Æquator ſome men account its variation by the diverſion of the Northern point, whereas beyond that Circle the Southern point is Soveraign, and the North ſubmits his preheminency. For in the Southern Coaſt either of *America* or *Africa*; the Southern point deflects and varieth toward the Land, as being diſpoſed and ſpirited that way by the Meridional and proper Hemiſphere. And therefore on that ſide of the Earth the varying point is beſt accounted by the South. And therefore alſo the Writings of ſome, and Maps of others, are to be enquired, that make the Needle decline unto the Eaſt twelve degrees at *Capo Frio*, and ſix at the Straits of *Magellan*; accounting hereby one point for another, and preferring the North in the Liberties and Province of the South.

That Garlick hinders not the attraction of the Loadſtone.

But certainly falſe it is what is commonly affirmed and believed, that Garlick doth hinder the attraction of the Loadſtone, which is notwithſtanding delivered by grave and worthy Writers, by *Pliny*, *Solinus*, *Ptolomy*, *Plutarch*, *Albertus*, *Matthiolus*, *Rueus*, *Langius*, and many more. An effect as ſtrange as that of *Homer*'s *Moly*, and the Garlick that *Mercury* beſtowed upon *Ulyſſes*. But that it is evidently falſe, many experiments declare. For an Iron wire heated red hot and quenched in the juice of Garlick, doth notwithſtanding contract a verticity from the Earth, and attracteth the Southern point of the Needle. If alſo the Tooth of a Loadſtone be covered or ſtuck in Garlick, it will notwithſtanding attract; and Needles excited and fixed in Garlick until they begin to ruſt, do yet retain their attractive and polary reſpects.

Nor yet the Adamant or Diamond.

Of the ſame ſtamp is that which is obtruded upon us by Authors ancient and modern, that an Adamant or Diamond prevents or ſuſpends the attraction of the Loadſtone: as is in open terms delivered by *Pliny*. *Adamas diſſidet cum Magnete lapide, ut juxtà poſitus ferrum non patiatur abſtrahi, aut ſi admotus magnes apprehenderit, rapiat atque auferat.* For if a Diamond be placed between a Needle and a Loadſtone, there will nevertheleſs enſue a Coition even over the body of the Diamond. And an eaſie matter it is to touch or excite a Needle through a Diamond, by placing it at the tooth of a Loadſtone; and therefore the relation is falſe, or our eſtimation of theſe Gemms untrue; nor are they Diamonds which carry that name amongſt us.

De generatione rerum.

It is not ſuddenly to be received what *Paracelſus* affirmeth, that if a Loadſtone be anointed with Mercurial Oyl, or only put into Quickſilver, it amitteth its attraction for ever. For we have found that Loadſtones and touched Needles, which have laid long time in Quickſilver, have not amitted their attraction. And we alſo find that red hot Needles or Wires extinguiſhed in Quickſilver, do yet acquire a verticity according to the Laws of poſition in extinction. Of greater repugnancy unto Reaſon is that which he delivers concerning its graduation, that heated in the fire and often extinguiſhed in Oyl of *Mars* or Iron, it acquires an ability to extract or draw forth a Nail faſtened in a Wall; for, as we have declared before, the vigor of the Loadſtone is deſtroyed by fire, nor will it be re-impregnated by any other Magnet than the Earth.

Nor is it to be made out what ſeemeth very plauſible, and formerly hath deceived us, that a Loadſtone will not attract an Iron or Steel red hot. The falſity hereof, diſcovered firſt by *Kircherus*, we can confirm by iterated experiment; very ſenſibly in armed Loadſtones, and obſcurely in any other.

True it is, that beſides fire ſome other ways there are of its deſtruction, as Age, Ruſt; and what is leaſt dreamt on, an unnatural or contrary ſituation. For being impolarly adjoyned unto a more vigorous Loadſtone, it will in a ſhort time exchange its Poles; or being kept in undue poſition, that is not lying on the Meridian, or elſe with its poles inverted, it receives in longer time impair in activity, exchange of Faces; and is more powerfully preſerved by poſition than by the duſt of Steel. But the ſudden and ſureſt way is fire; that is, fire not only actual but potential; the one ſurely and ſuddenly, the other ſlowly and imperfectly; the one changing, the other deſtroying the figure. For if diſtilled Vinegar or *Aqua fortis* be poured upon the powder of Loadſtone, the ſubſiding powder dryed, retains ſome Magnetical vertue, and will be attracted by the Loadſtone: but if the *menſtruum* or diſſolvent be evaporated to a conſiſtence, and afterward doth ſhoot into Icycles or Cryſtals, the Loadſtone hath no power upon them; and if in a full diſſolution of Steel a ſeparation of parts be made by precipitation or exhalation, the exſiccated powder hath loſt its wings, and aſcends not unto the Loadſtone. And though a Loadſtone fired doth preſently amit its proper vertue, and according to the poſition in cooling contracts a new verticity from the Earth; yet if the ſame be laid a while in *aqua fortis* or other corroſive water, and taken out before a conſiderable corroſion, it ſtill reſerves its attraction, and will convert the Needle according to former polarity. And that duly preſerved from violent corroſion, or the natural diſeaſe of ruſt, it may long conſerve its vertue, beſide the Magnetical vertue of the Earth which hath laſted ſince the Creation, a great example we have from the obſervation of our learned friend Mr. †*Graves*, in an Egyptian Idol cut out of Loadſtone, and found among the *Mummies*; which ſtill retains its attraction, though probably taken out of the Mine about two thouſand years ago.

† In his learned *Pyramidographia.*

It it improbable what *Pliny* affirmeth concerning the object of its attraction, that it attracts not only ferreous bodies, but alſo *liquorem vitri*; for in the body of Glaſs there is no ferreous or magnetical nature which might occaſion attraction. For of the Glaſs we uſe, the pureſt is made of the fineſt ſand and the aſhes of Chaly or Glaſwort; and the courſer or green ſort, of the aſhes of Brake or other plants. True it is that in the making of Glaſs, it hath been an ancient practice to caſt in pieces of magnet, or perhaps manganes: conceiving it carried away all ferreous and earthy parts, from the pure and running portion of Glaſs, which the Loadſtone would not reſpect; and therefore if that attraction were not rather Electrical than Magnetical, it was a wondrous effect what *Helmont* delivered concerning a Glaſs wherein the Magiſtery of Loadſtone was prepared, which after retained an attractive quality.

But whether the Magnet attracteth more than common Iron, may be tried in other bodies. It ſeems to attract the *Smyris* or Emery in powder; It draweth the ſhining or glaſſie powder brought from the *Indies*, and uſually imploied in writing-duſt. There is alſo in Smiths Cinders by ſome adheſion of Iron, whereby they appear as it were glazed, ſometime to be found a magnetical operation; for ſome thereof applied have power to move the Needle. But whether the aſhes of Vegetables which grow over Iron Mines contract a magnetical quality, as containing ſome mineral particles, which by ſublimation aſcend unto their Roots, and are attracted together with their nouriſhment; according as ſome affirm from the like obſervations upon the Mines of Silver, Quick ſilver, and Gold; we muſt refer unto further experiment.

It is alſo improbable and ſomething ſingular what ſome conceive, and *Euſebius Nierembergius*, a learned Jeſuit of *Spain* delivers, that the body of man is magnetical, and being placed in a Boat, the Veſſel will never reſt until the head reſpecteth the North. If this be true, the bodies of Chriſtians do lye unnaturally in their Graves. King *Cheops* in his Tomb, and the *Jews* in their beds have fallen upon the natural poſition: who reverentially declining the ſituation of their Temple, nor willing to lye as that ſtood, do place their Beds from North to South, and delight to ſleep Meridionally. This Opinion confirmed would much advance the Microcoſmical conceit, and

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commend the Geography of *Paracelſus*, who according to the Cardinal points of the World, divideth the body of man; and therefore working upon humane ordure, and by long preparation rendring it odoriferous, he terms it *Zibeta Occidentalis*, Weſtern *Civet*; making the face the Eaſt, but the poſteriours the *America* or Weſtern part of his Microcoſm. The verity hereof might eaſily be tried in *Wales*, where there are portable Boats, and made of Leather, which would convert upon the impulſion of any verticity; and ſeem to be the ſame, whereof in his deſcription of *Britain Cæſar* hath left ſome mention.

Another kind of verticity, is that which *Angelus doce mihi jus alias, Michael Sundevogis*, in a Tract *De Sulphure*, diſcovereth in Vegetables, from ſticks let fall or depreſſed under water; which equally framed and permitted unto themſelves, will aſcend at the upper end, or that which was vertical in their vegetation; wherein notwithſtanding as yet, we have not found ſatisfaction. Although perhaps too greedy of Magnalities, we are apt to make but favourable experiments concerning welcom Truths, and ſuch deſired verities. Anagrammatically.

It is alſo wondrous ſtrange what *Lælius Biſciola* reporteth, that if unto ten ounces of Loadſtone one of Iron be added, it encreaſeth not unto eleven, but weighs ten ounces ſtill. A relation inexcuſable in a work of leiſurable hours: the examination being as ready as the relation, and the falſity tried as eaſily as delivered. Nor is it to be omitted what is taken up by *Cæſius Bernardus* a late Mineralogiſt, and originally confirmed by *Porta*, that Needles touched with a *Diamond* contract a verticity, even as they do with a Loadſtone, which will not conſiſt with experiment. And therefore, as *Gilbertus* obſerveth, he might be deceived, in touching ſuch Needles with *Diamonds*, which had a verticity before, as we have declared moſt Needles to have; and ſo had he touched them with Gold or Silver, he might have concluded a magnetical vertue therein. *Horæ ſubſeciuæ.*

In the ſame form may we place *Fracaſtorius* his attraction of ſilver, *Philoſtratus* his *Pantarbes*; *Apollodorus* and *Beda* their relation of the Loadſtone that attracted only in the night. But moſt inexcuſable is *Franciſcus Rueus*, a man of our own profeſſion; who in his diſcourſe of *Gemms* mentioned in the *Apocalypſe*, undertakes a Chapter of the Loadſtone. Wherein ſubſtantially and upon experiment he ſcarce delivereth any thing: making long enumeration of its traditional qualities, whereof he ſeemeth to believe many, and ſome above convicted by experience, he is fain to ſalve as impoſtures of the Devil. But *Boëtius de Boot* Phyſician unto *Rodulphus* the ſecond, hath recompenſed this defect, and in his Tract, *De Lapidibus & Gemmis*, ſpeaks very materially hereof; and his Diſcourſe is conſonant unto Experience and Reaſon.

As for Relations Hiſtorical, though many there be of leſs account, yet two alone deſerve conſideration; The firſt concerneth magnetical Rocks, and attractive Mountains in ſeveral parts of the Earth. The other the Tomb of *Mahomet*, and bodies ſuſpended in the air. Of Rocks magnetical there are likewiſe two relations; for ſome are delivered to be in the *Indies*, and ſome in the extremity of the North, and about the very Pole. The Northern account is commonly aſcribed unto *Olaus Magnus* Archbiſhop of *Upſale*, who out of his Predeceſſor *Joannes Saxo*, and others, compiled a Hiſtory of ſome Northern Nations; but this aſſertion we have not diſcovered in that Work of his which commonly paſſeth amongſt us, and ſhould believe his Geography herein no more than that in the firſt line of his Book; when he affirmeth that *Biarmia* (which is not ſeventy degrees in latitude) hath the Pole for its Zenith, and Equinoctial for the Horizon.

Now upon this foundation, how uncertain ſoever, men have erected mighty illations, aſcribing thereto the cauſe of the Needles direction, and conceiving the effluxions from theſe Mountains and Rocks, invite the Lilly toward the North. Which conceit though countenanced by learned men, is not made out either by experience or reaſon; for no man hath yet attained or given a ſenſible account of the Pole by ſome degrees. It is alſo obſerved the Needle

doth

doth very much vary as it approacheth the Pole; whereas were there ſuch direction from the Rocks, upon a nearer approachment, it would more directly reſpect them. Beſide, were there ſuch magnetical Rocks under the Pole, yet being ſo far removed, they would produce no ſuch effect. For they that ſail by the Iſle of *Ilua* now called *Elba* in the Thuſcan Sea which abounds in veins of Loadſtone, obſerve no variation or inclination of the Needle; much leſs may they expect a direction from Rocks at the end of the Earth. And laſtly, men that aſcribe thus much unto Rocks of the North, muſt preſume or diſcover the like magneticals at the South: For in the Southern Seas, and far beyond the Æquator, variations are large, and declinations as conſtant as in the Northern Ocean.

The other relation of Loadſtone Mines and Rocks, in the ſhore of *India*, is delivered of old by *Pliny*; wherein, ſaith he, they are ſo placed both in abundance and vigour, that it proves an adventure of hazard to paſs thoſe Coaſts in a Ship with Iron nails. *Serapion* the *Moor*, an Author of good eſteem and reaſonable Antiquity, confirmeth the ſame, whoſe expreſſion in the word *magnes* is this. The Mine of this ſtone is in the Sea-coaſt of *India*, whereto when Ships approach, there is no Iron in them which flies not like a Bird unto thoſe Mountains; and therefore their Ships are faſtened not with Iron but Wood, for otherwiſe they would be torn to pieces. But this aſſertion, how poſitive ſoever, is contradicted by all Navigators that paſs that way; which are now many, and of our own Nation, and might ſurely have been controled by *Nearchus* the Admiral of *Alexander*, who not knowing the Compaſs, was fain to coaſt that ſhore.

(Probably) there be no magnetical Rocks.

For the relation concerning *Mahomet*, it is generally believed his Tomb at *Medina Talnabi*, in *Arabia*, without any viſible ſupporrers hangeth in the air between two Loadſtones artificially contrived both above and below; which conceit is fabulous and evidently falſe from the teſtimony of Ocular Teſtators, who affirm his Tomb is made of Stone, and lyeth upon the ground; as beſides others, the learned *Voſſius* obſerveth from *Gabriel Sionita*, and *Joannes Hefronita*, two *Maronites*, in their relations hereof. Of ſuch intentions and attempt by *Mahometans* we read in ſome Relators, and that might be the occaſion of the Fable, which by tradition of time and diſtance of place enlarged into the Story of being accompliſhed. And this hath been promoted by attempts of the like nature; for we read in *Pliny* that one *Dinocrates* began to Arch the Temple of *Arſinoe* in *Alexandria* with Loadſtone, that ſo her Statue might be ſuſpended in the air to the amazement of the beholders. And to lead on our credulity herein, confirmation may be drawn from Hiſtory and Writers of good authority. So is it reported by *Ruffinus*, that in the Temple of *Serapis* there was an Iron Chariot ſuſpended by Loadſtones in the air; which ſtones removed, the Chariot fell and daſhed into pieces. The like doth *Beda* report of *Bellerophon*'s Horſe, which framed of Iron, and placed between two Loadſtones, with wings expanſed, hung pendulous in the air.

Mahomet's Tomb of ſtone, and built upon the ground.

The verity of theſe Stories we ſhall not further diſpute, their poſſibility we may in ſome way determine; if we conceive what no man will deny, that bodies ſuſpended in the air have this ſuſpenſion from one or many Loadſtones placed both above and below it; or elſe by one or many placed only above it. Likewiſe the body to be ſuſpended in reſpect of the Loadſtone above, is either placed firſt at a pendulous diſtance in the *medium*, or elſe attracted unto that ſite by the vigor of the Loadſtone. And ſo we firſt affirm that poſſible it is a body may be ſuſpended between two Loadſtones; that is, it being ſo equally attracted unto both, that it determineth it ſelf unto neither. But ſurely this poſition will be of no duration; for if the air be agitated, or the body waved either way, it omits the equilibration, and diſpoſeth it ſelf unto the neareſt attractor. Again, It is not impoſſible (though hardly feaſible) by a ſingle Loadſtone to ſuſpend an Iron in the air, the Iron being artificially placed, and at a diſtance guided toward the ſtone, until it find the neutral point, wherein its gravity juſt equals the magnetical quality, the one exactly extolling as much as the other depreſſeth.

And

And laſtly, Impoſſible it is that if an Iron reſt upon the ground, and a Loadſtone be placed over it, it ſhould ever ſo ariſe as to hang in the way or *medium*; for that vigor which at a diſtance is able to overcome the reſiſtance of its gravity, and to lift it up from the Earth, will as it approacheth nearer, be ſtill more able to attract it; never remaining in the middle that could not abide in the extreams. Now the way of *Baptiſta Porta* that by a thred faſtneth a Needle to a Table, and then ſo guides and orders the ſame, that by the attraction of the Loadſtone it abideth in the air, infringeth not this reaſon; for this is a violent retention, and if the thred be looſened, the Needle aſcends and adheres unto the Attractor.

The Third conſideration concerneth Medical relations; wherein whatever effects are delivered, they are either derived from its mineral and ferreous condition, or elſe magnetical operation. Unto the ferreous and mineral quality pertaineth what *Dioſcorides* an ancient Writer and Souldier under *Anthony* and *Cleopatra* affirmeth, that half a dram of Loadſtone given with Honey and Water, proves a purgative medicine, and evacuateth groſs humours. But this is a quality of great incertainty; for omitting the vehicle of Water and Honey, which is of a laxative power it ſelf, the powder of ſome Loadſtones in this doſe doth rather conſtipate and binde, than purge and looſen the belly. And if ſometimes it cauſe any laxity, it is probably in the ſame way with Iron and Steel unprepared, which will diſturb ſome bodies, and work by Purge and Vomit. And therefore, whereas it is delivered in a Book aſcribed unto *Galen*, that it is a good medicine in Dropſies, and evacuates the waters of perſons ſo affected: It may I confeſs by ſiccity and aſtriction afford a confirmation unto parts relaxed, and ſuch as be hydropically diſpoſed; and by theſe qualities it may be uſeful in *Hernia's* or *Ruptures*, and for theſe it is commended by *Ætius*, *Ægineta*, and *Oribaſius*; who only affirm that it contains the vertue of *Hæmatites*, and being burnt was ſometimes vended for it. Wherein notwithſtanding there is an higher vertue; and in the ſame prepared, or in rich veins thereof though crude, we have obſerved the effects of Chalybeat Medicines; and the benefits of Iron and Steel in ſtrong obſtructions. And therefore that was probably a different vein of Loadſtone; or infected with other mineral mixture, which the Ancients commended for a purgative medicine, and ranked the ſame with the violenteſt kinds thereof: with *Hippophae*, *Cneoron*, and *Thymelæa*, as we find it in * *Hippocrates*; and might be ſomewhat doubtful, whether by the Magneſian ſtone, he underſtood the Loadſtone; did not *Achilles Statius* define the ſame, the Stone that loveth Iron.

Powder of Loadſtones, of what operation.

* *De morbis internis.*

To this mineral condition belongeth what is delivered by ſome, that wounds which are made with weapons excited by the Loadſtone, contract a malignity, and become of more difficult cure; which nevertheleſs is not to be found in the inciſion of Chirurgeons with knives, and lancets touched; which leave no ſuch effect behind them. Hither muſt we alſo refer that affirmative, which ſayes, the Loadſtone is poiſon; and therefore in the liſts of poyſons we find it in many Authors. But this our experience cannot confirm and the practice of the King of *Zeilan* clearly contradicteth; who, as *Garcias ab Horto*, Phyſician unto the *Spaniſh* Viceroy, delivereth, hath all his meat ſerved up in diſhes of Loadſtone, and conceives thereby he preſerveth the vigour of youth.

But ſurely from a magnetical activity muſt be made out what is let fall by *Ætius*, that a Loadſtone held in the hand of one that is podagrical, doth either cure or give great eaſe in the Gout. Or what *Marcellus Empericus* affirmeth, that as an amulet, it alſo cureth the headach; which are but additions unto its proper nature, and hopeful enlargements of its allowed attraction. For perceiving its ſecret power to draw magnetical bodies, men have invented a new attraction, to draw out the dolour and pain of any part. And from ſuch grounds it ſurely became a philter, and was conceived a medicine of ſome venereal attraction; and therefore upon this ſtone they graved the Image of *Venus*, according unto that of *Claudian*, *Venerem magnetica gemma figurat*. Hither muſt we alſo refer what is delivered concerning its

its powder to draw out of the body bullets and heads of arrows, and for the like intention is mixed up in plaſters. Which courſe, although as vain and ineffectual, it be rejected by many good Authors, yet is it not methinks ſo readily to be denyed, nor the Practice of many Phyſicians which have thus compounded plaſters, thus ſuddenly to be condemned, as may be obſerved in the *Emplaſtrum divinum Nicolai*, the *Emplaſtrum nigrum* of *Augſpurg*, the *Opodeldoch* and *Attractivum* of *Paracelſus* with ſeveral more in the Diſpenſatory of *Wecker*, and practice of *Sennertus*. The cure alſo of *Hernia's*, or *Ruptures* in *Pareus*: and the method alſo of curation lately delivered by *Daniel Beckerus* †, and approved by the Profeſſors of *Leyden*, that is, of a young man of *Spruceland* that caſually ſwallowed a knife about ten inches long, which was cut out of his ſtomach, and the wound healed up. In which cure to attract the knife to a convenient ſituation, there was applied a plaſter made up with the powder of Loadſtone. Now this kind of practice *Libavius*, *Gilbertus*, and lately † *Swickardus* condemn, as vain, and altogether unuſeful; becauſe a Loadſtone in powder hath no attractive power; for in that form it amits his polary reſpects, and loſeth thoſe parts which are the rule of attraction.

† *De cultrivoro Pruſſiaco*, 1636. The cure of the Pruſſian Knife.

† In his *Ars Magnetica*.

Wherein to ſpeak compendiouſly, if experiment hath not deceived us, we firſt affirm that a Loadſtone in powder amitts not all attraction. For if the powder of a rich vein be in a reaſonable quantity preſented toward the Needle freely placed, it will not appear to be void of all activity, but will be able to ſtir it. Nor hath it only a power to move the Needle in powder and by it ſelf, but this will it alſo do, if incorporated and mixed with plaſters; as we have made trial in the *Emplaſtrum de Minio* with half an ounce of the maſs, mixing a dram of Loadſtone. For applying the magdaleon or roll unto the Needle, it would both ſtir and attract it; not equally in all parts, but more vigorouſly in ſome, according unto the Mine of the Stone, more plentifully diſperſed in the maſs. And laſtly, In the Loadſtone powdered, the polary reſpects are not wholly deſtroyed. For thoſe diminutive particles are not atomical or meerly indiviſible, but conſiſt of dimenſions ſufficient for their operations, though in obſcurer effects. Thus if unto the powder of Loadſtone or Iron we admove the North Pole of the Loadſtone, the Powders or ſmall diviſions will erect and conform themſelves thereto: but if the South pole approach, they will ſubſide, and inverting their bodies, reſpect the Loadſtone with the other extream. And this will happen not only in a body of powder together, but in any particle or duſt divided from it.

Now though we diſavow not theſe plaſters, yet ſhall we not omit two cautions in their uſe, that therein the Stone be not too ſubtilly powdered, for it will better manifeſt its attraction in a more ſenſible dimenſion. That where is deſired a ſpeedy effect, it may be conſidered whether it were not better to relinquiſh the powdered plaſters, and to apply an entire Loadſtone unto the part: And though the other be not wholly ineffectual, whether this way be not more powerful, and ſo might have been in the cure of the young man delivered by *Beckerus*.

The laſt conſideration concerneth Magical relations; in which account we comprehend effects derived and fathered upon hidden qualities, ſpecifical forms, Antipathies and Sympathies, whereof from received grounds of Art, no reaſons are derived. Herein relations are ſtrange and numerous; men being apt in all Ages to multiply wonders, and Philoſophers dealing with admirable bodies, as Hiſtorians have done with excellent men upon the ſtrength of their great atchievements, aſcribing acts unto them not only falſe but impoſſible; and exceeding truth as much in their relations, as they have others in their actions. Hereof we ſhall briefly mention ſome delivered by Authors of good eſteem: whereby we may diſcover the fabulous inventions of ſome, the credulous ſupinity of others, and the great diſſervice unto truth by both: multiplying obſcurities in Nature, and authoriſing hidden qualities that are falſe: whereas wiſe men are aſhamed there are ſo many true.

And

And first, *Dioscorides* puts a shrewd quality upon it, (and such as men are apt enough to experiment;) who therewith discovers the incontinency of a wife, by placing the Loadstone under her pillow, whereupon she will not be able to remain in bed with her husband. The same he also makes a help unto thievery. For thieves, saith he, having a design upon a house, do make a fire at the four corners thereof, and cast therein the fragments of Loadstone: whence ariseth a fume that so disturbeth the inhabitants, that they forsake the house, and leave it to the spoil of the Robbers. This relation, how ridiculous soever, hath *Albertus* taken up above a thousand years after, and *Marbodeus* the Frenchman hath continued the same in Latine Verse, which with the Notes of *Pictorius* is currant unto our dayes. As strange must be the Lithomancy or divination from this Stone, whereby as *Tzetzes* delivers, *Helenus* the Prophet foretold the destruction of *Troy*: and the Magick thereof not safely to be believed, which was delivered by *Orpheus*, that sprinkled with water it will upon a question emit a voice not much unlike an Infant. But surely the Loadstone of *Laurentius Guascus* the Physician, is never to be matched; wherewith, as *Cardan* delivereth, whatsoever Needles or Bodies were touched, the wounds and punctures made thereby, were never felt at all. And yet as strange is that which is delivered by some, that a Loadstone preserved in the salt of a *Remora*, acquires a power to attract gold out of the deepest Wells. Certainly a studied absurdity not casually cast out, but plotted for perpetuity; for the strangeness of the effect ever to be admired, and the difficulty of the trial never to be convicted.

These conceits are of that monstrosity that they refute themselves in their recitements. There is another of better notice, and whispered thorow the World with some attention; credulous and vulgar auditors readily believing it, and more judicious and distinctive heads, not altogether rejecting it. The conceit is excellent, and if the effect would follow, somewhat divine; whereby we might communicate like spirits, and confer on earth with *Menippus* in the Moon. And this is pretended from the sympathy of two Needles touched with the same Loadstone, and placed in the center of two Abcedary circles or rings, with letters described round about them, one friend keeping one, and another the other, and agreeing upon an hour wherein they will communicate. For then, saith Tradition, at what distance of place soever, when one Needle shall be removed unto any letter; the other by a wonderful sympathy will move unto the same. But herein I confess my experience can find no truth; for having expresly framed two circles of Wood, and according to the number of the Latine letters divided each into twenty three parts, placing therein two stiles or Needles composed of the same steel, touched with the same Loadstone, and at the same point: of these two, whensoever I removed the one, although but at the distance of half a span, the other would stand like *Hercules* Pillars, and if the Earth stand still, have surely no motion at all. Now as it is not possible that any body should have no boundaries, or Sphere of its activity, so it is improbable it should effect that at distance, which nearer hand it cannot at all perform.

Again, The conceit is ill contrived, and one effect inferred, whereas the contrary will ensue. For if the removing of one of the Needles from *A* to *B*, should have any action or influence on the other, it would not intice it from *A* to *B*, but repell it from *A* to *Z*: for Needles excited by the same point of the stone, do not attract, but avoid each other, even as these also do, when their invigorated extreams approach unto one other.

Lastly, Were this conceit assuredly true, yet were it not a conclusion at every distance to be tried by every head: it being no ordinary or Almanack business, but a problem Mathematical, to find out the difference of hours in different places; nor do the wisest exactly satisfie themselves in all. For the hours of several places anticipate each other, according unto their Longitudes, which are not exactly discovered of every place; and therefore the trial hereof at a considerable interval, is best performed at the distance of the *Antœci*; that is such habitations as have the same Meridian and equal parallel, on different sides of the Æquator; or more plainly the same Longitude and

the same Latitude unto the South, which we have in the North. For unto such situations it is noon and midnight at the very same time.

And therefore the Sympathy of these Needles is much of the same mould with that intelligence which is pretended from the flesh of one body transmuted by insition into another. For if by the Art of † *Taliacotius*, a permutation of flesh, or transmutation be made from one mans body into another, as if a piece of flesh be exchanged from the bicipital muscle of either parties arm, and about them both, an Alphabet circumscribed; upon a time appointed, as some conceptions affirm, they may communicate at what distance soever. For if the one shall prick himself in *A*, the other at the same time will have a sense thereof in the same part: and upon inspection of his arm perceive what letters the other points out in his. Which is a way of intelligence very strange: and would require the lost Art of *Pythagoras*, who could read a reverse in the Moon.

† *De curtorum Chirurgia.*

Now this magnetical conceit how strange soever, might have some original in Reason; for men observing no solid body whatsoever did interrupt its action, might be induced to believe no distance would terminate the same; and most conceiving it pointed unto the Pole of Heaven, might also opinion that nothing between could restrain it. Whosoever was the Author, the *Æolus* that blew it about, was *Famianus Strada*, that Elegant Jesuit, in his Rhetorical prolusions, who chose out this subject to express the stile of *Lucretius*. But neither *Baptista Porta*, *De Furtivis Literarum notis*; *Trithemius* in his Steganography, *Selenus* in his Cryptography, or *Nuncius inanimatus* make any consideration hereof, although they deliver many ways to communicate thoughts at distance. And this we will not deny may in some manner be effected by the Loadstone; that is, from one room into another; by placing a table in the wall common unto both, and writing thereon the same letters one against another: for upon the approach of a vigorous Loadstone unto a letter on this side, the Needle will move unto the same on the other. But this is a very different way from ours at present; and hereof there are many ways delivered, and more may be discovered, which contradict not the rule of its operations.

Nunc. inanim. by D. *Godwin* Bishop of *Hereford.*

As for *Unguentum Armarium*, called also *Magneticum*, it belongs not to this discourse, it neither having the Loadstone for its ingredient, nor any one of its actions: but supposed other principles, as common and universal spirits, which convey the action of the remedy unto the part, and conjoyns the vertue of bodies far disjoyned. But perhaps the cures it doth, are not worth so mighty principles; it commonly healing but simple wounds, and such as mundified and kept clean, do need no other hand than that of Nature, and the Balsam of the proper part. Unto which effect there being fields of Medicines, it may be a hazardous curiosity to rely on this; and because men say the effect doth generally follow, it might be worth the experiment to try, whether the same will not ensue, upon the same Method of cure, by ordinary Balsams, or common vulnerary plasters.

Many other Magnetisms may be pretended and the like attractions through all the creatures of Nature. Whether the same be verified in the action of the Sun upon inferiour bodies, whether there be *Æolian* Nutmegs, whether the flux and reflux of the Sea be caused by any Magnetism from the Moon; whether the like be really made out, or rather Metaphorically verified in the sympathies of Plants and Animals, might afford a large dispute; and *Kircherus* in his *Catena Magnetica* hath excellently discussed the same; which work came late unto our hand, but might have much advantaged this Discourse.

Other Discourses there might be made of the Loadstone; as Moral, Mystical, Theological; and some have handsomely done them, as *Ambrose*, *Austine*, *Gulielmus Parisiensis*, and many more: but these fall under no Rule, and are as boundless as mens inventions. And though honest minds do glorifie God hereby; yet do they most powerfully magnifie him, and are to be looked on with another eye, who demonstratively set forth its Magnalities; who not from postulated or precarious inferences, entreat a courteous assent; but from experiments and undeniable effects, enforce the wonder of its Maker.

CHAP.

CHAP. IV.

Of Bodies Electrical.

HAving thus ſpoken of the Loadſtone and Bodies Magnetical, I ſhall in the next place deliver ſomewhat of Electrical, and ſuch as may ſeem to have attraction like the other. Hereof we ſhall alſo deliver what particularly ſpoken or not generally known is manifeſtly or probably true; what generally believed is alſo falſe or dubious. Now by Electrical bodies, I underſtand not ſuch as are Metallical, mentioned by *Pliny*, and the Ancients; for their *Electrum* was a mixture made of Gold, with the Addition of a fifth part of Silver; a ſubſtance now as unknown as true *Aurichalcum*, or *Corinthian* Braſs, and ſet down among things loſt by *Pancirollus*. Nor by Electrick Bodies do I conceive ſuch only as take up ſhavings, ſtraws, and light bodies, in which number the Ancients only placed *Jet* and *Amber*; but ſuch as conveniently placed unto their objects attract all bodies palpable whatſoever. I ſay conveniently placed, that is, in regard of the object, that it be not too ponderous, or any way affixed; in regard of the Agent, that it be not foul or ſullied, but wiped, rubbed, and excitated; in regard of both, that they be conveniently diſtant, and no impediment interpoſed. I ſay, all bodies palpable, thereby excluding fire, which indeed it will not attract, nor yet draw through it; for fire conſumes its effluxions by which it ſhould attract. Bodies Electrical, what?

Now although in this rank but two were commonly mentioned by the Ancients, *Gilbertus* diſcovereth many more; as *Diamonds*, *Saphirs*, *Carbuncles*, *Iris*, *Opals*, *Amethyſts*, *Beryl*, *Cryſtal*, *Briſtol-ſtones*, *Sulphur*, *Maſtick*, hard *Wax*, hard *Roſin*, *Arſenic*, *Sal-gemm*, *Roch-Alum*, common Glaſs, *Stibium*, or Glaſs of *Antimony*. Unto theſe *Cabeus* addeth white *Wax*, *Gum Elemi*, *Gum Guaiaci*, *Pix Hiſpanica*, and *Gipſum*. And unto theſe we add *Gum Anime*, *Benjamin*, *Talcum*, *China-diſhes*, *Sandaraca*, *Turpentine*, *Styrax liquida*, and *Caranna* dryed into a hard conſiſtence. And the ſame attraction we find, not only in ſimple bodies, but ſuch as are much compounded; as in the *Oxycroceum* plaſter, and obſcurely that *ad Herniam*, and *Gratia Dei*; all which ſmooth and rightly prepared, will diſcover a ſufficient power to ſtir the Needle, ſetled freely upon a well-pointed pin; and ſo as the Electrick may be applied unto it without all diſadvantage.

But the attraction of theſe Electricks we obſerve to be very different. Reſinous or unctuous bodies, and ſuch as will flame, attract moſt vigorouſly, and moſt thereof without frication; as *Anime*, *Benjamin*, and moſt powerfully good hard Wax, which will convert the Needle almoſt as actively as the Loadſtone. And we believe that all or moſt of this ſubſtance, if reduced to hardneſs, tralucency or clearneſs, would have ſome attractive quality. But Juices concrete, or Gums eaſily diſſolving in Water, draw not at all: as *Aloe*, *Opium*, *Sanguis Draconis*, *Lacca*, *Galbanum*, *Sagapenum*. Many Stones alſo both precious and vulgar, although terſe and ſmooth, have not this power attractive; as *Emeralds*, *Pearl*, *Jaſpis*, *Cornelians*, *Agath*, *Heliotropes*, *Marble*, *Alabaſter*, *Touchſtone*, *Flint*, and *Bezoar*. Glaſs attracts but weakly, though clear: ſome ſlick Stones and thick Glaſſes indifferently: *Arſenic* but weakly, ſo likewiſe Glaſs of *Antimony*, but *Crocus Metallorum* not at all. Salts generally, but weakly, as *Sal Gemma*, *Alum*, and alſo *Talke*; not very diſcoverably by any frication: but if gently warmed at the fire, and wiped with a dry cloth, they will better diſcover their Electricities.

No Metal attracts, nor Animal concretion we know, although polite and ſmooth; as we have made tryal in *Elks* Hoofs, Hawks Talons, the Sword of a *Sword-fiſh*, *Tortois-ſhells*, *Sea-horſe*, and *Elephants* Teeth, in Bones, in *Harts-horn*, and what is uſually conceived *Unicorns-horn*. No Wood though never ſo

hard and polished, although out of some thereof Electrick bodies proceed; as *Ebony*, *Box*, *Lignum vitæ*, *Cedar*, *&c.* And although *Jet* and *Amber* be reckoned among *Bitumens*, yet neither do we find *Asphaltus*, that is *Bitumen* of *Juda*, nor *Sea-cole*, nor *Camphire*, nor *Mummia* to attract, although we have tried in large and polished pieces. Now this attraction have we tried in straws and paleous bodies, in Needles of Iron, equilibrated, Powders of Wood and Iron, in Gold and Silver foliate. And not only in solid but fluent and liquid bodies, as oyls made both by expression and distillation; in water, in spirits of Wine, *Vitriol* and *Aqua fortis*.

But how this attraction is made, is not so easily determined; that 'tis performed by effluviums is plain, and granted by most; for Electricks will not commonly attract, except they grow hot or become perspirable. For if they be foul and obnubilated, it hinders their effluxion; nor if they be covered, though but with Linen or Sarsenet, or if a body be interposed, for that intercepts the *effluvium*. If also a powerful and broad Electrick of Wax or *Anime* be held over fine powder, the Atoms or small particles will ascend most numerously unto it; and if the Electrick be held unto the light, it may be observed that many thereof will fly, and be as it were discharged from the Electrick to the distance sometime of two or three inches. Which motion is performed by the breath of the *effluvium* issuing with agility; for as the Electrick cooleth, the projection of the Atoms ceaseth.

Cabeus his way for attraction in bodies Electrick.

The manner hereof *Cabeus* wittily attempteth, affirming that this *effluvium* attenuateth and impelleth the neighbour air, which returning home in a gyration, carrieth with it the obvious bodies unto the Electrick. And this he labours to confirm by experiments; for if the straws be raised by a vigorous Electrick, they do appear to wave and turn in their ascents. If likewise the Electrick be broad, and the straws light and chaffy, and held at a reasonable distance, they will not arise unto the middle, but rather adhere toward the Verge or Borders thereof. And lastly, if many straws be laid together, and a nimble Electrick approach, they will not all arise unto it, but some will commonly start aside, and be whirled a reasonable distance from it. Now that the air impelled returns unto its place in a gyration or whirling, is evident from the Atoms or Moats in the Sun. For when the Sun so enters a hole or window, that by its illumination the Atoms or Motes become perceptible, if then by our breath the air be gently impelled, it may be perceived, that they will circularly return and in a gyration unto their places again.

The way of Sir *Kenelm Digby*.

Another way of their attraction is also delivered; that is, by a tenuious emanation or continued *effluvium*, which after some distance retracteth into it self; as is observable in drops of Syrups, Oyl, and seminal Viscosities, which spun at length, retire into their former dimensions. Now these effluviums advancing from the body of the Electrick, in their return do carry back the bodies whereon they have laid hold within the Sphere or Circle of their continuities; and these they do not onely attract, but with their viscous arms hold fast a good while after. And if any shall wonder why these effluviums issuing forth impel and protrude not the straw before they can bring it back; it is because the *effluvium* passing out in a smaller thred and more enlengthened filament, stirreth not the bodies interposed, but returning unto its original, falls into a closer substance, and carrieth them back unto it self. And this way of attraction is best received, embraced by Sir *Kenelm Digby* in his excellent Treatise of bodies, allowed by *Des Cartes* in his principles of Philosophy, as far as concerneth fat and resinous bodies, and with exception of Glass, whose attraction he also deriveth from the recess of its effluxion. And this in some manner the words of *Gilbertus* will bear: *Effluvia illa tenuiora concipiunt & amplectuntur corpora, quibus uniuntur, & electris tanquam extensis brachiis, & ad fontem propinquitate invalescentibus effluviis, deducuntur.* And if the ground were true, that the Earth were an Electrick body, and the air but the effluvium thereof, we might have more reason to believe that from this attraction, and by this effluxion, bodies tended to the Earth, and could not remain above it.

Our

Our other discourse of Electricks concerneth a general opinion touching *Jet* and *Amber*, that they attract all light bodies, except *Ocymum* or *Basil*, and such as be dipped in oyl or oyled; and this is urged as high as *Theophrastus*: but *Scaliger* acquitteth him; And had this been his assertion *Pliny* would probably have taken it up, who herein stands out, and delivereth no more but what is vulgarly known. But *Plutarch* speaks positively in his *Symposiacks*, that *Amber* attracteth all bodies, excepting Basil and oyled substances. With *Plutarch* consent many Authors both Ancient and Modern; but the most inexcusable are *Lemnius* and *Rueus*, whereof the one delivering the nature of Minerals mentioned in Scripture, the infallible fountain of Truth, confirmeth their vertues with erroneous traditions; the other undertaking the occult and hidden Miracles of Nature, accepteth this for one; and endeavoureth to alledge a reason of that which is more than occult, that is, not existent.

Now herein, omitting the authority of others, as the Doctrine of experiment hath informed us, we first affirm, That *Amber* attracts not Basil, is wholly repugnant unto truth. For if the leaves thereof or dried stalks be stripped into small straws, they arise unto *Amber*, *Wax*, and other Electries, no otherwise than those of Wheat and Rye: nor is there any peculiar fatness or singular viscosity in that plant that might cause adhesion, and so prevent its ascension. But that *Jet* and *Amber* attract not straws oyled, is in part true and false. For if the straws be much wet or drenched in oyl, true it is that *Amber* draweth them not; for then the oyl makes the straw to adhere unto the part whereon they are placed, so that they cannot rise unto the Attractor; and this is true, not only if they be soaked in Oyl, but spirits of Wine or Water. But if we speak of Straws or festucous divisions lightly drawn over with oyl, and so that it causeth no adhesion; or if we conceive an Antipathy between Oyl and *Amber*; the Doctrine is not true. For *Amber*, will attract straws thus oyled, it will convert the Needles of Dials made either of Brass or Iron, although they be much oyled; for in these Needles consisting free upon their Center, there can be no adhesion. It will likewise attract Oyl it self, and if it approacheth unto a drop thereof, it becometh conical, and ariseth up unto it, for Oyl taketh not away his attraction, although it be rubbed over it. For if you touch a piece of Wax already excitated with common Oyl, it will notwithstanding attract, though not so vigorously as before. But if you moisten the same with any Chymical Oyl, Water, or spirits of Wine, or only breath upon it, it quite omits its attraction, for either its effluencies cannot get through, or will not mingle with those substances.

It is likewise probable the Ancients were mistaken concerning its substance and generation; they conceiving it a vegetable concretion made of the gums of Trees, especially *Pine* and *Poplar* falling into the water, and after indurated or hardened, whereunto accordeth the Fable of *Phaeton*'s sisters: but surely the concretion is Mineral, according as is delivered by *Boëtius*. For either it is found in Mountains and mediterraneous parts; and so it is a fat and unctuous sublimation in the Earth, concreted and fixed by salt and nitrous spirits wherewith it meeteth. Or else, which is most usual, it is collected upon the Sea shore; and so it is a fat and bituminous juice coagulated by the saltness of the Sea. Now that salt spirits have a power to congeal and coagulate unctuous bodies, is evident in Chymical operations; in the distillations of *Arsenick*, sublimate and *Antimony*; in the mixture of oyl of *Juniper*, with the salt and acid spirit of *Sulphur*; for thereupon ensueth a concretion unto the consistence of *Birdlime*; as also in spirits of salt, or *Aqua fortis* poured upon oyl of Olive, or more plainly in the Manufacture of Soap. And many bodies will coagulate upon commixture, whose separated natures promise no concretion. Thus upon a solution of *Tin* by *Aqua fortis*, there will ensue a coagulation, like that of whites of Eggs. Thus the volatile salt of Urine will coagulate *Aqua vita*, or spirits of Wine; and thus perhaps (as *Helmont* excellently declareth) the stones or calculous concretions in Kidney or Bladder may be produced, the spirits or volatile salt

How the stone is bred in the Kidney or Bladder.

ſalt of Urine conjoyning with the *Aqua vitæ* potentially lying therein; as he illuſtrateth from the diſtillation of fermented Urine. From whence ariſeth an *Aqua vitæ* or ſpirit, which the volatile Salt of the ſame Urine will congeal; and finding an earthy concurrence, ſtrike into a lapideous ſubſtance.

Of a Bee and a Viper involved in Amber.

Mart. l. 4.

Laſtly, We will not omit what *Bellabonus* upon his own experiment writ from *Dantzick* unto *Mellichius*, as he hath left recorded in his Chapter, *De Succino*, that the bodies of *Flies*, *Piſmires*, and the like, which are ſaid oftimes to be included in *Amber*, are not real but repreſentative, as he diſcovered in ſeveral pieces broke for that purpoſe. If ſo, the two famous Epigrams hereof in *Martial* are but Poetical, the *Piſmire* of *Braſſavolus* Imaginary, and *Cardan's Mouſoleum* for a Flie, a meer phancy. But hereunto we know not how to aſſent, as having met with ſome whoſe reals make good their repreſentments.

CHAP. V.

Compendiouſly of ſundry other common Tenents, concerning Mineral and Terreous Bodies, which examined, prove either falſe or dubious.

1. AND firſt we hear it in every mouth, and in many good Authors read it, That a *Diamond*, which is the hardeſt of Stones, not yielding unto *Steel*, *Emery*, or any thing but its own powder, is yet made ſoft, or broke by the blood of a Goat. Thus much is affirmed by *Pliny*, *Solinus*, *Albertus*, *Cyprian*, *Auſtin*, *Iſidore*, and many Chriſtian Writers; alluding herein unto the heart of man, and the precious blood of our Saviour, who was typified by the Goat that was ſlain, and the Scape-Goat in the Wilderneſs; and at the effuſion of whoſe blood, not only the hard hearts of his enemies relented, but the ſtony Rocks and Vail of the Temple were ſhattered. But this I perceive is eaſier affirmed, than proved. For *Lapidaries*, and ſuch as profeſs the Art of cutting this Stone, do generally deny it; and they that ſeem to countenance it, have in their deliveries ſo qualified it, that little from thence of moment can be inferred for it. For firſt, the holy Fathers, without a further enquiry did take it for granted, and reſted upon the authority of the firſt deliverers. As for *Albertus*, he promiſeth this effect, but conditionally, not except the Goat drink Wine, and be fed with *Siler montanum*, *petroſelinum*, and ſuch Herbs as are conceived of power to break the Stone in the Bladder. But the words of *Pliny*, from whom moſt likely the reſt at firſt derived it, if ſtrictly conſidered, do rather overthrow, than any way advantage this effect. His words are theſe: *Hircino rumpitur ſanguine, nec aliter quàm recenti, calidoque macerata, & ſic quoque multis ictibus, tunc etiam præterquam eximias incudes malleóſque ferreos frangens.* That is, it is broken with Goats blood, but not except it be freſh and warm, and that not without many blows, and then alſo it will break the beſt Anvils and Hammers of Iron. And anſwerable hereto, is the aſſertion of *Iſidore* and *Solinus*. By which account, a Diamond ſteeped in Goats blood, rather increaſeth in hardneſs, than acquireth any ſoftneſs by the infuſion; for the beſt we have are comminuible without it; and are ſo far from breaking Hammers, that they ſubmit unto piſtillation, and reſiſt not an ordinary Peſtle.

Upon this conceit aroſe perhaps the diſcovery of another; that the blood of a Goat was ſoveraign for the Stone, as it ſtands commended by many good Writers, and brings up the compoſition in the powder of *Nicolaus*, and the Electuary of the Queen of *Colein*. Or rather becauſe it was found

Pulvis Lithontripticus.

an

an excellent medicine for the Stone, and its ability commended by ſome to diſſolve the hardeſt thereof; it might be conceived by amplifying apprehenſions to be able to break a *Diamond*; and ſo it came to be ordered that the Goat ſhould be fed with ſaxifragous herbs, and ſuch as are conceived of power to break the ſtone. However it were, as the effect is falſe in the one, ſo is it ſurely very doubtful in the other. For although inwardly received it may be very diuretick, and expulſe the ſtone in the Kidneys; yet how it ſhould diſſolve or break that in the bladder, will require a further diſpute; and perhaps would be more reaſonably tried by a warm injection thereof, than as it is commonly uſed. Wherein notwithſtanding, we ſhould rather rely upon the urine in a caſtlings bladder, a reſolution of Crabs eyes, or the ſecond diſtillation of Urine, as *Helmont* hath commended; or rather (if any ſuch might be found) a Chylifactory *menſtruum* or digeſtive preparation drawn from ſpecies or individuals, whoſe ſtomachs peculiarly diſſolve lapideous bodies.

2. *That Glaſs is poiſon*, according unto common conceit, I know not how to grant. Not only from the innocency of its ingredients, that is, fine Sand and the aſhes of Glaſs-wort or Fearn, which in themſelves are harmleſs and uſeful; or becauſe I find it by many commended for the Stone: but alſo from experience, as having given unto Dogs above a dram thereof, ſubtilly powdered in Butter and Paſte, without any viſible diſturbance.

Why Glaſs is commonly held to be poyſonous.

The conceit is ſurely grounded upon the viſible miſchief of Glaſs groſly or courſely powdered, for that indeed is mortally noxious, and effectually uſed by ſome to deſtroy Mice and Rats; for by reaſon of its acuteneſs and angularity, it commonly excoriates the parts through which it paſſeth, and ſolicits them unto a continual expulſion. Whereupon there enſue fearful ſymptoms, not much unlike thoſe which attend the action of poiſon. From whence notwithſtanding, we cannot with propriety impoſe upon it that name, either by occult or elementary quality, which he that concedeth will much enlarge the Catalogue or Liſts of Poiſons. For many things, neither deleterious by ſubſtance or quality, are yet deſtructive by figure, or ſome occaſional activity. So are Leeches deſtructive, and by ſome accounted poiſon; not properly, that is by temperamental contrariety, occult form, or ſo much as elemental repugnancy; but becauſe being inwardly taken they faſten upon the veins, and occaſion an effuſion of bloud, which cannot be eaſily ſtanched. So a Sponge is miſchievous, not in it ſelf, for in its powder it is harmleſs: but becauſe being received into the ſtomach it ſwelleth, and occaſioning a continual diſtenſion, induceth a ſtrangulation. So Pins, Needles, ears of Rye or Barley may be poiſon. So *Daniel* deſtroyed the Dragon by a compoſition of three things, whereof none was poiſon alone, nor properly all together, that is, Pitch, Fat, and Hair, according as is expreſſed in the Hiſtory. Then *Daniel* took Pitch, and Fat, and Hair, and did ſeethe them together, and made lumps thereof, theſe he put in the Dragons mouth, and ſo he burſt aſunder. That is, the Fat and Pitch being cleaving bodies, and the Hair continually extimulating the parts: by the action of the one, Nature was provoked to expell, but by the tenacity of the other forced to retain: ſo that there being left no paſſage in or out, the Dragon brake in pieces. It muſt therefore be taken of groſly-powdered Glaſs, what is delivered by *Grevinus:* and from the ſame muſt that mortal dyſentery proceed which is related by *Sanctorius.* And in the ſame ſenſe ſhall we only allow a *Diamond* to be poiſon; and whereby as ſome relate, *Paracelſus* himſelf was poiſoned. So even the precious fragments and cordial gems which are of frequent uſe in Phyſick, and in themſelves confeſſed of uſeful faculties, received in groſs and angular Powders, may ſo offend the bowels, as to procure deſperate languors, or cauſe moſt dangerous fluxes.

That Glaſs may be rendred malleable and pliable unto the hammer, many conceive, and ſome make little doubt, when they read in *Dio*, *Pliny*, and *Petronius*, that one unhappily effected it for *Tiberius.* Which notwithſtanding muſt needs ſeem ſtrange unto ſuch as conſider, that bodies are ductile from a tenacious

tenacious humidity, which ſo holdeth the parts together, that though they dilate or extend, they part not from each others. That bodies run into Glaſs when the volatile parts are exhaled, and the continuating humour ſeparated: the Salt and Earth, that is, the fixed parts remaining. And therefore vitrification maketh bodies brittle, as deſtroying the viſcous humours which hinder the diſruption of parts. Which way be verified even in the bodies of Metals. For Glaſs of Lead or Tin is fragile, when that glutinous Sulphur hath been fired out, which made their bodies ductile.

He that would moſt probably attempt it, muſt experiment upon Gold. Whoſe fixed and flying parts are ſo conjoyned, whoſe Sulphur and continuating principle is ſo united unto the Salt, that ſome may be hoped to remain to hinder fragility after vitrification. But how to proceed, though after frequent corroſion, as that upon the agency of fire, it ſhould not revive into its proper body before it comes to vitrifie, will prove no eaſie diſcovery.

3. That Gold inwardly taken, either in ſubſtance, infuſion, decoction or extinction, is a cordial of great efficacy, in ſundry Medical uſes, although a practice much uſed, is alſo much queſtioned, and by no man determined beyond diſpute. There are hereof I perceive two extream opinions; ſome exceſſively magnifying it, and probably beyond its deſerts; others extreamly vilifying it, and perhaps below its demerits. Some affirming it a powerful Medicine in many diſeaſes, others averring that ſo uſed, it is effectual in none: and in this number are very eminent Phyſicians, *Eraſtus*, *Duretus*, *Rondeletius*, *Braſſavolus* and many other; who beſide the ſtrigments and ſudorous adheſions from mens hands, acknowledge that nothing proceedeth from Gold in the uſual decoction thereof. Now the capital reaſon that led men unto this opinion, was their obſervation of the inſeparable nature of Gold; it being excluded in the ſame quantity as it was received, without alteration of parts, or diminution of its gravity.

Now herein to deliver ſomewhat which in a middle way may be entertained; we firſt affirm, that the ſubſtance of Gold is invincible by the powerfulleſt action of natural heat; and that not only alimentally in a ſubſtantial mutation, but alſo medicamentally in any corporeal converſion. As is very evident, not only in the ſwallowing of golden bullets, but in the leſſer and foliate diviſions thereof: paſſing the ſtomach and guts even as it doth the throat, that is, without abatement of weight or conſiſtence. So that it entereth not the veins with thoſe electuaries wherein it is mixed: but taketh leave of the permeant parts, at the mouths of the *Meſaraicks*, or Lacteal Veſſels, and accompanieth the inconvertible portion unto the ſiege. Nor is its ſubſtantial converſion expectable in any compoſition or aliment wherein it is taken. And therefore that was truly a ſtarving abſurdity, which befel the wiſhes of *Midas*. And little credit there is to be given to the golden Hen, related by *Wendlerus*. So in the extinction of Gold, we muſt not conceive it parteth with any of its ſalt or diſſoluble principle thereby, as we may affirm of Iron; for the parts thereof are fixed beyond diviſion, nor will they ſeparate upon the ſtrongeſt teſt of fire. This we affirm of pure Gold: for that which is currant and paſſeth in ſtamp amongſt us, by reaſon of its allay, which is a proportion of Silver or Copper mixed therewith, is actually dequantitated by fire, and poſſibly by frequent extinction.

Secondly, Although the ſubſtance of Gold be not immuted, or its gravity ſenſibly decreaſed, yet that from thence ſome vertue may proceed either in ſubſtantial reception or infuſion, we cannot ſafely deny. For poſſible it is that bodies may emit vertue and operation without abatement of weight; as is moſt evident in the Loadſtone, whoſe effluencies are continual, and communicable without a minoration of gravity. And the like is obſervable in Bodies electrical, whoſe emiſſions are leſs ſubtile. So will a Diamond or Sapphire emit an *effluvium* ſufficient to move the Needle or a Straw, without diminution of weight. Nor will poliſhed Amber, although it ſend forth a groſs and corporal exhalement, be found a long time defective upon the exacteſt ſcales. Which is more eaſily conceivable in a continued and tenacious *effluvium*, whereof a great part retreats into its body.

Thirdly,

Thirdly, If Amulets do work by emanations from their bodies, upon thoſe parts whereunto they are appended, and are not yet obſerved to abate their weight; if they produce viſible and real effects by imponderous and inviſible emiſſions, it may be unjuſt to deny the poſſible efficacy of Gold, in the non-omiſſion of weight, or deperdition of any ponderous particles.

Laſtly, Since *Stibium* or glaſs of Antimony, ſince alſo its *Regulus* will manifeſtly communicate unto Water or Wine, a purging and vomitory operation; and yet the body it ſelf, though after iterated infuſions, cannot be found to abate either vertue or weight: we ſhall not deny but Gold may do the like, that is, impart ſome effluences unto the infuſion, which carry with them the ſeparable ſubtilties thereof.

That therefore this Metal thus received, hath any undeniable effect, we ſhall not imperiouſly determine, although beſide the former experiments; many more may induce us to believe it. But ſince the point is dubious and not yet authentically decided, it will be no diſcretion to depend on diſputable remedies; but rather in caſes of known danger, to have recourſe unto Medicines of known and approved activity. For, beſide the benefit accruing unto the ſick, hereby may be avoided a groſs and frequent errour, commonly committed in the uſe of doubtful remedies conjointly with thoſe which are of approved vertues; that is, to impute the cure unto the conceited remedy, or place it on that whereon they place their opinion. Whoſe operation although it be nothing, or its concurrence not conſiderable, yet doth it obtain the name of the whole cure: and carrieth often the honour of the capital energie, which had no finger in it.

Herein exact and critical trial ſhould be made by publick enjoinment whereby determination might be ſetled beyond debate: for ſince thereby, not only the bodies of men, but great Treaſures might be preſerved, it is not only an errour of Phyſick, but folly of State, to doubt thereof any longer.

4. That a pot full of aſhes, will ſtill contain as much water as it would without them, although by *Ariſtotle* in his Problems taken for granted, and ſo received by moſt, is not effectible upon the ſtricteſt experiment I could ever make. For when the airy interſtices are filled, and as much of the ſalt of the aſhes as the water will imbibe is diſſolved, there remains a groſs and terreous portion at the bottom, which will poſſeſs a ſpace by it ſelf, according whereto there will remain a quantity of Water not receivable; ſo will it come to paſs in a pot of ſalt, although decrepitated; and ſo alſo in a pot of Snow. For ſo much it will want in reception, as its ſolution taketh up, according unto the bulk whereof, there will remain a portion of Water not to be admitted. So a Glaſs ſtuffed with pieces of Sponge will want about a ſixth part of what it would receive without it. So Sugar will not diſſolve beyond the capacity of the Water, nor a Metal in *aqua-fortis* be corroded beyond its reception. And ſo a pint of ſalt of Tartar expoſed unto a moiſt air until it diſſolve, will make far more liquor, or as ſome term it oyl, than the former meaſure will contain.

Nor is it only the excluſion of air by water, or repletion of cavities poſſeſſed thereby, which cauſeth a pot of aſhes to admit ſo great a quantity of Water, but alſo the ſolution of the ſalt of the aſhes into the body of the diſſolvent. So a pot of aſhes will receive ſomewhat more of hot Water than of cold, for the warm water imbibeth more of the Salt; and a veſſel of aſhes more than one of pin-duſt or filings of Iron; and a Glaſs full of Water will yet drink in a proportion of Salt or Sugar without overflowing.

Nevertheleſs to make the experiment with moſt advantage, and in which ſenſe it approacheth neareſt the truth, it muſt be made in aſhes throughly burnt and well reverberated by fire, after the ſalt thereof hath been drawn out by iterated decoctions. For then the body being reduced nearer unto Earth, and emptied of all other principles, which had former ingreſſion unto it, becometh more porous, and greedily drinketh in water. He that hath beheld what quantity of Lead the teſt of ſaltleſs aſhes will imbibe, upon the refining of Silver, hath encouragement to think it will do very much more in water.

The Ingredients of Gunpowder.

5. Of white powder and ſuch as is diſcharged without report, there is no ſmall noiſe in the World: but how far agreeable unto truth, few I perceive are able to determine. Herein therefore to ſatisfie the doubts of ſome, and amuſe the credulity of others, We firſt declare, that Gunpowder conſiſteth of three ingredients, Salt-petre, Small-coal, and Brimſtone. Salt-petre although it be alſo natural and found in ſeveral places, yet is that of common uſe an artificial Salt, drawn from the infuſion of ſalt Earth, as that of Stales, Stables, Dove-houſes, Cellars, and other covered places, where the rain can neither diſſolve, nor the Sun approach to reſolve it. Brimſtone is a Mineral body of fat and inflammable parts, and this is either uſed crude, and called Sulphur Vive, and is of a ſadder colour; or after depuration ſuch as we have in magdaleons or rolls, of a lighter yellow. Small-coal is known unto all, and for this uſe is made of *Sallow*, *Willow*, *Alder*, *Hazel*, and the like; which three proportionably mixed, tempered, and formed into granulary bodies, do make up that Powder which is in uſe for Guns.

Now all theſe, although they bear a ſhare in the diſcharge, yet have they diſtinct intentions, and different offices in the compoſition. From Brimſtone proceedeth the piercing and powerful firing; for Small-coal and Petre together will only ſpit, not vigorouſly continue the ignition. From Small-coal enſueth the black colour and quick accenſion; for neither Brimſtone nor Petre, although in Powder, will take fire like Small-coal, nor will they eaſily kindle upon the ſparks of a Flint; as neither will *Camphire*, a body very inflammable: but Small-coal is equivalent to Tinder, and ſerveth to light the Sulphur. It may alſo ſerve to diffuſe the ignition through every part of the mixture; and being of more groſs and fixed parts, may ſeem to moderate the activity of Salt-petre, and prevent too haſty rarefaction. From Salt-petre proceedeth the force and the report; for Sulphur and Small-coal mixed, will not take fire with noiſe, or exilition, and Powder which is made of impure and greaſie Petre hath but a weak emiſſion, and giveth a faint report. And therefore in the three ſorts of Powder, the ſtrongeſt containeth moſt Salt-petre, and the proportion thereof is about ten parts of Petre, unto one of Coal & Sulphur.

But the immediate cauſe of the Report, is the vehement commotion of the air upon the ſudden and violent eruption of the Powder; for that being ſuddenly fired, and almoſt altogether, upon this high rarefaction requireth by many degrees a greater ſpace than before its body occupied; but finding reſiſtance, it actively forceth his way, and by concuſſion of the air occaſioneth the Report. Now with what violence it forceth upon the air, may caſily be conceived, if we admit what *Cardan* affirmeth, that the Powder fired doth occupy an hundred times a greater ſpace than its own bulk; or rather what *Snellius* more exactly accounteth, that it exceedeth its former ſpace no leſs than 12000 and 500 times. And this is the reaſon not only of this fulminating report of Guns, but may reſolve the cauſe of thoſe terrible cracks, and affrighting noiſes of Heaven; that is, the nitrous and ſulphureous exhalations, ſet on fire in the Clouds; whereupon requiring a larger place, they force out their way, not only with the breaking of the cloud, but the laceration of the air about it. When if the matter be ſpirituous, and the cloud compact, the noiſe is great and terrible; If the cloud be thin, and the Materials weak, the eruption is languid, ending in coruſcations and flaſhes without noiſe, although but at the diſtance of two miles; which is eſteemed the remoteſt diſtance of clouds. And therefore ſuch lightnings do ſeldom any harm. And therefore alſo it is prodigious to have Thunder in a clear ſky, as is obſervably recorded in ſome Hiſtories

The cauſe of Thunder.

The greateſt diſtance of the Clouds.

From the like cauſe may alſo proceed ſubterraneous Thunders and Earthquakes, when ſulphureous and nitrous veins being fired, upon rarefaction do force their way through bodies that reſiſt them. Where if the kindled matter be plentiful, and the Mine cloſe and firm about it, ſubverſion of Hills and Towns doth ſometimes follow: If ſcanty, weak, and the Earth hollow or porous, there only enſueth ſome faint concuſſion or tremulous and quaking Motion. Surely, a main reaſon why the Ancients were ſo imperfect in the doctrine of Meteors, was their ignorance of Gun-powder and Fireworks, which beſt diſcover the cauſes of many thereof. Now

The cauſe of Earthquakes.

Now therefore he that would destroy the report of Powder, must work upon the Petre; he that would exchange the colour, must think how to alter the Small-coal. For the one, that is, to make white Powder, it is surely many ways feasible: The best I know is by the powder of rotten Willows; Spunk, or Touch-wood prepared, might perhaps make it Russet: and some, as *Beringuccio* affirmeth, have promised to make it Red. All which notwithstanding both little concern the Report, for that, as we have shewed, depends on another Ingredient. And therefore also under the colour of black, this principle is very variable; for it is made not only by *Willow*, *Alder*, *Hazel*, &c. But some above all commend the coals of *Flax* and *Rushes*, and some also contend the same may be effected with Tinder. In his *Pyrotechnia.*

As for the other, that is, to destroy the Report, it is reasonably attempted but two ways; either by quite leaving out, or else by silencing the Salt-petre. How to abate the vigour thereof, or silence its bombulation, a way is promised by *Porta*, not only in general terms by some fat bodies, but in particular by *Borax* and butter mixed in a due proportion; which, saith he, will so go off as scarce to be heard by the discharger; and indeed plentifully mixed, it will almost take off the Report, and also the force of the charge. That it may be thus made without Salt-petre, I have met with but one example, that is, of *Alphonsus* Duke of *Ferrara*, who in the relation of *Brassavolus* and *Cardan*, invented such a Powder as would discharge a bullet without Report. *De examine Salium.*

That therefore white Powder there may be, there is no absurdity: that also such a one as may give no report, we will not deny a possibility. But this however, contrived either with or without Salt-petre, will surely be of little force, and the effects thereof no way to be feared: For as it omits of Report, so will it of effectual exclusion, and so the charge be of little force which is excluded. For this much is reported of that famous Powder of *Alphonsus*, which was not of force enough to kill a Chicken, according to the delivery of *Brassavolus*. *Jamque pulvis inventus est, qui glandem sine bombo proiicit, nec tamen vehementer ut vel pullum interficere possit.*

It is not to be denied, there are ways to discharge a bullet, not only with Powder that makes no noise, but without any Powder at all; as is done by Water and Wind-guns, but these afford no fulminating Report, and depend on single principles. And even in ordinary Powder there are pretended other ways to alter the noise and strength of the discharge; and the best, if not only way, consists in the quality of the Nitre: for as for other ways which make either additions or alterations in the Powder, or charge, I find therein no effect: That unto every pound of Sulphur, an adjection of one ounce of Quick-silver, or unto every pound of Petre, one ounce of *Sal Armoniac* will much intend the force, and consequently the Report, as *Beringuccio* hath delivered, I find no success therein. That a piece of *Opium* will dead the force and blow, as some have promised, I find herein no such peculiarity, no more than in any Gum or viscose body: and as much effect there is to be found from *Scammony*. That a Bullet dipped in oyl by preventing the transpiration of air, will carry farther, and pierce deeper, as *Porta* affirmeth, my experience cannot discern. That Quick-silver is more destructive than shot, is surely not to be made out; for it will scarce make any penetration, and discharged from a Pistol, will hardly pierce through a Parchment. That Vinegar, spirits of Wine or the distilled water of Orange-pills, whetewith the Powder is tempered, are more effectual unto the Report than common Water, as some do promise, I shall not affirm; but may assuredly more conduce unto the preservation and durance of the Powder, as *Cataneo* hath well observed. *Cat. avertimenti intorno a un Bombardiero.*

That the heads of arrows and bullets have been discharged with that force, as to melt or grow red hot in their flight, though commonly received, and taken up by *Aristotle* in his Meteors, is not so easily allowable by any, who shall consider, that a Bullet of Wax will mischief without melting; that an Arrow or Bullet discharged against Linen or Paper do not set them on fire; and hardly apprehend how an Iron should grow red hot, since the swiftest

motion at hand will not keep one red that hath been red by fire; as may be obſerved in ſwinging a red hot Iron about, or faſtning it into a Wheel; which under that motion will ſooner grow cold than without it. That a Bullet alſo mounts upward upon the horizontal or point-blank diſcharge, many Artiſts do not allow: who contend that it deſcribeth a parabolical and bowing line, by reaſon of its natural gravity inclining it always downward.

But, Beſide the prevalence from Salt-peter as Maſter-ingredient in the mixture; Sulphur may hold a greater uſe in the compoſition and further activity in the excluſion, than is by moſt conceived. For Sulphur vive makes better Powder than common Sulphur, which nevertheleſs is of a quick accenſion. For Small-coal, Salt petre, and *Camphire* made into Powder will be of little force, wherein notwithſtanding there wants not the accending ingredient. And *Camphire*, though it flame well, yet will not fluſh ſo lively, or defecate Salt-petre, if you inject it thereon, like Sulphur: as in the preparation of *Sal prunellæ*. And laſtly, though many ways may be found to light this Powder, yet is there none I know to make a ſtrong and vigorous Powder of Salt-petre, without the admixtion of Sulphur, *Arſenic* red and yellow, that is, *Orpiment* and *Sandarach* may perhaps do ſomething, as being inflammable and containing Sulphur in them; but containing alſo a ſalt, and mercurial mixtion, they will be of little effect; and white or cryſtalline *Arſenic* of leſs, for that being artificial, and ſublimed with ſalt, will not endure flammation.

This Antipathy or contention between Salt-petre and Sulphur upon an actual fire, in their compleat and diſtinct bodies, is alſo manifeſted in their preparations, and bodies which inviſibly contain them. Thus in the preparation of *Crocus Metallorum*; the matter kindleth and fluſheth like Gunpowder, wherein notwithſtanding, there is nothing but *Antimony* and Salt-peter. But this may proceed from the Sulphur of *Antimony*, not enduring the ſociety of Salt-petre; for after three or four accenſions, through a freſh addition of Petre, the Powder will fluſh no more, for the ſulphur of the *Antimony* is quite exhaled. Thus Iron in *Aqua fortis* will fall into ebullition, with noiſe and emication, as alſo a craſs and fumid exhalation, which are cauſed from this combat of the Sulphur of Iron, with the acid and nitrous ſpirits of *Aqua fortis*. So is it alſo in *Aurum fulminans*, or Powder of Gold diſſolved in *Aqua Regis*, and precipitated with oyl of *Tartar*, which will kindle without an actual fire, and afford a repott like Gun-powder; that is not as *Crollius* affirmeth from any Antipathy between *Sal Armoniac* and *Tartar*, but rather between the nitrous ſpirits of *Aqua Regis*, commixed *per minima* with the ſulphur of Gold, as *Sennertus* hath obſerved.

De conſenſu Chymicorum, &c.

6. That *Coral* (which is a *Lithophyton* or ſtone-plant, and groweth at the bottom of the Sea) is ſoft under Water, but waxeth hard in the air, although the aſſertion of *Dioſcorides*, *Pliny*, and conſequently *Solinus*, *Iſidore*, *Rueus*, and many others, and ſtands believed by moſt, we have ſome reaſon to doubt, eſpecially if we conceive with common Believers, a total ſoftneſs at the bottom, and this induration to be ſingly made by the air, not only from ſo ſudden a petrifaction and ſtrange induration, not eaſily made out from the qualities of air, but becauſe we find it rejected by experimental enquiries. *Johannes Beguinus* in his Chapter of the tincture of *Coral* undertakes to clear the World of this Error, from the expreſs experiment of *John Baptiſta de Nicole*, who was Over-ſeer of the gathering of *Coral* upon the Kingdom of *Tunis*. This Gentleman, ſaith he, deſirous to find the nature of *Coral*, and to be reſolved how it groweth at the bottom of the Sea, cauſed a man to go down no leſs than a hundred fathom, with expreſs to take notice whether it were hard or ſoft in the place where it groweth. Who returning, brought in each hand a branch of *Coral*, affirming it was as hard at the bottom, as in the air where he delivered it. The ſame was alſo confirmed by a tryal of his own, handling it a fathom under water before it felt the air. *Boëtius* in his accurate Tract *De Gemmis*, is of the ſame opinion, not aſcribing its concretion unto the air, but the coagulating ſpirits of Salt, and lapidifical juice of the Sea, which entring the parts of that Plant,

In the French Copy.

How Coral of a Plant becomes a Stone.

Plant, overcomes its vegetability, and converts it into a lapideous ſubſtance, And this, ſaith he, doth happen when the Plant is ready to decay; for all *Coral* is not hard, and in many concreted Plants ſome parts remain unpetrefied, that is the quick and livelier parts remain as Wood, and were never yet converted. Now that Plants and ligneous bodies may indurate under Water without approachment of air, we have experiment in *Coralline*, with many Coralloidal concretions; and that little ſtony Plant which Mr. *Johnſon* nameth, *Hippuris coralloides*, and *Geſner foliis manſu Arenoſis*, we have found in freſh water, which is the leſs concretive portion of that Element. We have alſo with us the viſible petrification of Wood in many waters, whereof ſo much as is covered with water converteth into ſtone; as much as is above it and in the air, retaineth the form of Wood, and continueth as before.

Now though in a middle way we may concede, that ſome are ſoft and others hard; yet whether all *Coral* were firſt a woody ſubſtance, and afterward converted; or rather ſome thereof were never ſuch, but from the ſprouting ſpirit of Salt, were able even in their ſtony natures to ramifie and ſend forth branches; as is obſervable in ſome ſtones, in ſilver and metallick bodies, is not without ſome queſtion. And ſuch at leaſt might ſome of thoſe be, which *Fiaroumti* obſerved to grow upon Bricks at the bottom of the Sea, upon the coaſt of *Barbarie*. *Gaz's Hiſtor. Coral.*

7. We are not throughly reſolved concerning *Porcellane* or *China* diſhes, that according to common belief they are made of Earth, which lieth in preparation about an hundred years under ground; for the relations thereof are not only divers, but contrary, and Authors agree not herein. *Guido Pancirollus* will have them made of Egg-ſhells, Lobſter-ſhells, and *Gypſum* laid up in the Earth the ſpace of 80 years: of the ſame affirmation is *Scaliger*, and the common opinion of moſt. *Ramuzius* in his Navigations is of a contrary aſſertion, that they are made out of Earth, not laid under ground, but hardned in the Sun and Wind, the ſpace of forty years. But *Gonzales de Mendoza*, a man imployed into *China* from *Philip* the ſecond King of *Spain*, upon enquiry and ocular experience, delivered a way different from all theſe. For inquiring into the artifice thereof, he found they were made of a Chalky Earth; which beaten and ſteeped in water, affordeth a cream or fatneſs on the top, and a groſs ſubſidence at the bottom; out of the cream or ſuperfluitance, the fineſt diſhes, ſaith he, are made, out of the reſidence thereof the courſer; which being formed, they gild or paint, and not after an hundred years, but preſently commit unto the furnace. This, ſaith he, is known by experience, and more probable than what *Odoardus Barboſa* hath delivered, that they are made of ſhells, and buried under earth an hundred years. And anſwerable in all points hereto, is the relation of *Linſchotten*, a diligent enquirer, in his Oriental Navigations. Later confirmation may be had from *Alvarez* the Jeſuit, who lived long in thoſe parts, in his relations of *China*. That *Porcellane* Veſſels were made but in one Town of the Province of *Chiamſi*: That the earth was brought out of other Provinces; but for the advantage of water, which makes them more polite and perſpicuous, they were only made in this. That they were wrought and faſhioned like thoſe of other Countries, whereof ſome were tincted blew, ſome red, others yellow, of which colour only they preſented unto the King. Of what matter the *China* diſhes be made.

The lateſt account hereof may be found in the Voyage of the Dutch Embaſſador, ſent from *Batavia* unto the Emperour of *China*, printed in *French* 1665. which plainly informeth, that the Earth, whereof *Porcellane* diſhes are made, is brought from the Mountains of *Hoang*, and being formed into ſquare loaves, is brought by water, and marked with the Emperours Seal: that the Earth it ſelf is very lean, fine, and ſhining like Sand, : and that it is prepared and faſhioned after the ſame manner which the *Italians* obſerve in the fine Earthen Veſſels of *Faventia* or *Fuenca*: that they are ſo reſerved concerning that artifice, that 'tis only revealed from Father unto Son: that they are painted with *Indico* baked in a fire for fifteen days together, and

with

with very dry and not ſmoaking Wood: which when the Author had ſeen he could hardly contain from laughter at the common opinion above rejected by us.

Now if any enquire, why being ſo commonly made, and in ſo ſhort a time, they are become ſo ſcarce or not at all to be had; The Anſwer is given by theſe laſt Relators, that under great penalties it is forbidden to carry the firſt ſort out of the Country. And of thoſe ſurely the properties muſt be verified, which by *Scaliger* and others are aſcribed unto China-diſhes: That they admit no poiſon, that they ſtrike fire, that they will grow hot no higher than the liquor in them ariſeth. For ſuch as paſs amongſt us, and under the name of the fineſt, will only ſtrike fire, but not diſcover *Aconite*, *Mercury*, or *Arſenick*; but may be uſeful in dyſenteries and fluxes beyond the other.

8. Whether a Carbuncle (which is eſteemed the beſt and biggeſt of Rubies) doth flame in the dark, or ſhine like a coal in the night, though generally agreed on by common Believers, is very much queſtioned by many. By *Milius*, who accounts it a Vulgar Error: by the learned *Boëtius*, who could not find it verified in that famous one of *Rodulphus*, which was as big as an Egg, and eſteemed the beſt in *Europe*. Wherefore although we diſpute not the poſſibility, (and the like is ſaid to have been obſerved in ſome Diamonds,) yet whether herein there be not too high an apprehenſion, and above its natural radiancy, is not without juſt doubt: however it be granted a very ſplendid *Gem*, and whoſe ſparks may ſomewhat reſemble the glances of fire, and Metaphorically deſerve that name. And therefore when it is conceived by ſome, that this Stone in the Breaſt-plate of *Aaron* reſpected the Tribe of *Dan*, who burnt the City of *Laiſh*; and *Sampſon* of the ſame Tribe, who fired the Corn of the *Philiſtims*; in ſome ſenſe it may be admitted, and is no intolerable conception.

As for that *Indian* Stone that ſhined ſo brightly in the Night, and pretended to have been ſhewn to many in the Court of *France*, as *Andreus Chioccus* hath declared out of *Thuanus*, it proved but an impoſture, as that eminent Philoſopher * *Licetus*, hath diſcovered, and therefore in the reviſed Editions of *Thuanus*, it is not to be found. As for the *Hoſphorus* or † *Bononian* Stone, which expoſed unto the Sun, and then cloſely ſhut up, will afterward afford a light in the dark; it is of unlike conſideration, for that requireth calcination or reduction into a dry powder by fire, whereby it imbibeth the light in the vaporous humidity of the air about it, and therefore maintaineth its light not long, but goes out when the vaporous vehicle is conſumed.

* *Licet. de quæſt. per Epiſtolas.*
† *Licet. de lapide Bononienſe.*

9. Whether the *Ætites* or *Eagle*-ſtone hath that eminent property to promote delivery or reſtrain abortion, reſpectively applied to lower or upward parts of the body, we ſhall not diſcourage common practice by our queſtion: but whether they anſwer the account thereof, as to be taken out of *Eagles* neſts, co-operating in Women into ſuch effects, as they are conceived toward the young *Eagles*: or whether the ſingle ſignature of one ſtone included in the matrix and belly of another, were not ſufficient at firſt, to derive this virtue of the pregnant Stone, upon others in impregnation, may yet be farther conſidered. Many ſorts there are of this ratling Stone, beſide the *Geodes*, containing a ſofter ſubſtance in it. Divers are found in *England*, and one we met with on the Sea-ſhore, but becauſe many of eminent uſe are pretended to be brought from *Iſeland*, wherein are divers airies of *Eagles*; we cannot omit to deliver what we received from a learned perſon in that Countrey, *Ætites an in nidis Aquilarum aliquando fuerit repertus, neſcio. Noſtra certe memoria, etiam inquirentibus non contigit inveniſſe, quare in fabulis habendum.*

Theodorus Jonas Hitterdalæ Paſtor.

10. Terrible apprehenſions and anſwerable unto their names, are raiſed of *Fayrie* ſtones, and *Elves* ſpurs, found commonly with us in Stone, Chalk, and Marl-pits, which notwithſtanding are no more than *Echinometrites* and *Belemnites*, the Sea-Hedg-Hog, and the *Dart*-ſtone, ariſing from ſome ſiliceous Roots, and ſofter than that of Flint, the Maſter-ſtone lying more regularly in courſes, and ariſing from the primary and ſtrongeſt ſpirit of the Mine. Of the *Echinites*, ſuch as are found in Chalk-pits are white, glaſſie, and built

built upon a Chalky inside; some of an hard and flinty substance, are found in Stone-pits and elsewhere. Common opinion commendeth them for the Stone, but are most practically used against Films in Horses eyes

11. Lastly, He must have more heads than *Rome* had Hills, that makes out half of those Vertues ascribed unto Stones, and their not only Medical, but Magical proprieties, which are to be found in Authors of great Name. In *Psellus*, *Serapion*, *Evax*, *Albertus*, *Aleazar*, *Marbodeus*; in *Maiolus*, *Rueus*, *Mylius*, and many more.

That *Lapis Lazuli* hath in it a purgative faculty we know; that *Bezoar* is (*a*) Antidotal, *Lapis Judaicus* (*b*) Diuretical, *Coral* (*c*) Antepileptical, we will not deny. That *Cornelians*, *Jaspis*, *Heliotropes*, and Blood-stones, may be of vertue to those intentions they are imployed, experience and visible effects will make us grant. But that an *Amethyst* prevents inebriation; that an *Emerald* will break if worn in copulation; That a *Diamond* laid under the Pillow, will betray the Incontinency of a Wife; that a *Sapphire* is preservative against Inchantments; That the fume of an *Agath* will avert a Tempest; or the wearing of a *Chrysoprase* make one out of love with Gold, as some have delivered, we are yet, I confess, to believe, and in that infidelity are likely to end our dayes. And therefore, they which in the explication of the two Beryls upon the *Ephod*, or the twelve Stones in the Rational or Breast-plate of *Aaron*; or those twelve which garnished the Wall of the Holy City in the *Apocalypse*, have drawn their significations from such as these; or declared their symbolical Verities from such traditional Falsities, have surely corrupted the sincerity of their Analogies, or misunderstood the mysterie of their intentions.

(*a*) Against Poyson.
(*b*) Provoking Urine.
(*c*) Against the Falling-sickness.

Most men conceive that the twelve Stones in *Aaron*'s Breast-plate made a Jewel surpassing any, and not to be parallel'd; which notwithstanding will hardly be made out from the description of the Text; for the Names of the Tribes were engraven thereon, which must notably abate their lustre. Beside, it is not clear made out that the best of Gemms, a Diamond, was amongst them; nor is it to be found in the list thereof, set down by the *Jerusalem Thargum*, wherein we find the darker Stones of *Sardius*, *Sardonyx*, and *Jasper*; and if we receive them under those names wherein they are usually described, it is not hard to contrive a more illustrious and splendent Jewel. But being not ordained for meer lustre by diaphanous and pure tralucencies, their mysterious significations became more considerable than their Gemmary substances; and those no doubt did nobly answer the intention of the Institutor. Beside some may doubt whether there be twelve distinct species of noble tralucent Gemms in nature, at least yet known unto us, and such as may not be referred unto some of those in high esteem among us, which come short of the number of twelve; which to make up, we must find out some others to match and joyn with the Diamond, *Beryl*, *Sapphire*, *Emerald*, *Amethyst*, *Topaz*, *Chrysolyt*, *Jacynth*, *Ruby*, and if we may admit it in this number, the Oriental Gianat.

CHAP.

CHAP. VI.

Of ſundry Tenets concerning Vegetables or Plants, which examined, prove either falſe or dubious.

1. MAny Mola's and falſe conceptions there are of *Mandrakes*, the firſt from great Antiquity, conceiveth the Root thereof reſembleth the ſhape of Man; which is a conceit not to be made out by ordinary inſpection, or any other eyes, than ſuch as regarding the Clouds, behold them in ſhapes conformable to pre-apprehenſions.

Now whatever encourageth the firſt invention, there have not been wanting many wayes of its promotion. The firſt a Catachreſtical and far derived ſimilitude it holds with Man; that is, in a bifurcation or diviſion of the Root into two parts, which ſome are content to call Thighs; whereas notwithſtanding they are oft-times three, and when but two, commonly ſo complicated and creſſed, that men for this deceit are fain to effect their deſign in other Plants: And as fair a reſemblance is often found in *Carrots*, *Parſnips*, *Briony*, and many others. There are, I confeſs, divers Plants which carry about them not only the ſhape of parts, but alſo of whole Animals, but ſurely not all thereof, unto whom this conformity is imputed. Whoever ſhall peruſe the ſignatures of *Crollius*, or rather the Phytognomy of *Porta*, and ſtrictly obſerve how Vegetable Realities are commonly forced into Animal Repreſentations, may eaſily perceive in very many, the ſemblance is but poſtulatory, and muſt have a more aſſimilating phancy than mine to make good many thereof.

Μάνδρα, Spelunca.

Illiterate heads have been led on by the name, which in the firſt ſyllable expreſſeth its Repreſentation; but others have better obſerved the Laws of *Etymology*, and deduced it from a word of the ſame Language, becauſe it delighteth to grow in obſcure and ſhady places: which derivation, although we ſhall not ſtand to maintain, yet the other ſeemeth anſwerable unto the Etymologies of many Authors, who often confound ſuch nominal Notations. Not to enquire beyond our own profeſſion, the Latine Phyſicians which moſt adhered unto the *Arabick* way, have often failed herein; particularly *Valeſcus de Taranta*, a received Phyſician, in whoſe *Philonium* or Medical practice theſe may be obſerved; *Diarhea*, ſaith he, *Quia pluries venit in die. Heriſepela, quaſi hærens pilis; Emorrhois, ab emach ſanguis & morrhois quod eſt cadere. Lithargia à Litos quod eſt oblivio & Targus morbus. Scotomia à Scotus quod eſt videre, & mias muſca. Opthalmia ab opus Græce quod eſt ſuccus, & Talmon quod eſt oculus. Paraliſis, quaſi læſio partis. Fiſtula à fos ſonus & ſtolon quod eſt emiſſio, quaſi emiſſio ſoni vel vocis.* Which are derivations as ſtrange indeed as the other, and hardly to be parallel'd elſewhere; confirming not only the words of one Language with another, but creating ſuch as were never yet in any.

In the old Edition.

The received diſtinction and common Notation by Sexes, hath alſo promoted the conceit; for true it is, that *Herbaliſts* from ancient times, have thus diſtinguiſhed them; naming that the Male, whoſe leaves are lighter, and Fruit and Apples rounder; but this is properly no generative diviſion, but rather ſome note of diſtinction in colour, figure or operation. For though *Empedocles* affirm, there is a mixt and undivided Sex in Vegetables; and *Scaliger* upon *Ariſtotle*, doth favourably explain that opinion; yet will it not conſiſt with the common and ordinary acception, nor yet with *Ariſtotle*'s definition. For if that be Male which generates in another, that Female which procreates in it ſelf; if it be underſtood of Sexes conjoined, all Plants are Female; and if of disjoined and congreſſive generation, there is no Male or Female in them at all.

De Plantis.

But

But the *Atlas* or main *Axis* which ſupported this opinion, was dayly experience, and the viſible teſtimony of ſenſe. For many there are in ſeveral parts of *Europe*, who carry about Roots and ſell them unto ignorant people, which handſomely make out the ſhape of Man or Woman. But theſe are not productions of Nature, but contrivances of Art, as divers have noted, and *Matthiolus* plainly detected, who learned this way of Trumpery from a vagabond cheater lying under his cure for the French diſeaſe. His words are theſe, and may determine the point, *Sed profectò vanum & fabuloſum, &c.* But this is vain and fabulous, which ignorant people, and ſimple women believe; for the roots which are carried about by impoſtors to deceive unfruitful women, are made of the roots of Canes, Briony and other Plants: for in theſe yet freſh and virent, they carve out the figures of men and women, firſt ſticking therein the grains of Barley or Millet, where they intend the hair ſhould grow; then bury them in ſand until the grains ſhoot forth their roots, which at the longeſt will happen in twenty days; they afterward clip and trim thoſe tender ſtrings in the faſhion of beards and other hairy teguments. All which like other impoſtures once diſcovered, is eaſily effected, and in the root of white *Briony* may be practiſed every ſpring.

The impoſtures touching the Root of Mandrake.

What is therefore delivered in favour thereof, by Authors ancient or modern, muſt have its root in tradition, impoſture, far derived ſimilitude, or caſual and rare contingency. So may we admit of the Epithet of *Pythagoras*, who calls it *Anthropomorphus*; and that of *Columella*, who terms it *Semihomo*; more appliable unto the Man-*Orchis*, whoſe flower repreſents a Man. Thus is * *Albertus* to be received when he affirmeth, that *Mandrakes* repreſent man-kind with the diſtinction of either Sex. Under theſe reſtrictions may thoſe Authors be admitted, which for this opinion are introduced by † *Druſius*; nor ſhall we need to queſtion the monſtrous root of *Briony* deſcribed in *Aldrovandus*.

Orchis Anthropomorphus, cujus Icon in Kircheri Magia paraſtatica.

* *De mandragora.*

† *De monſtris.*

The ſecond aſſertion concerneth its production, That it naturally groweth under Gallowſes and places of execution, ariſing from fat or urine that drops from the body of the dead; a ſtory ſomewhat agreeable unto the fable of the Serpents teeth ſowed in the earth by *Cadmus*; or rather the birth of *Orion* from the urine of *Jupiter*, *Mercury*, and *Neptune*. Now this opinion ſeems grounded on the former, that is, a conceived ſimilitude it hath with man; and therefore from him in ſome way they would make out its production: Which conceit is not only erroneous in the foundation, but injurious unto Philoſophy in the ſuperſtruction; Making putrefactive generations, correſpondent unto ſeminal productions, and conceiving in equivocal effects an univocal conformity unto the efficient. Which is ſo far from being verified of animals in their corruptive mutations into Plants, that they maintain not this ſimilitude in their nearer tranſlation into animals. So when the Oxe corrupteth into Bees, or the Horſe into Hornets, they come not forth in the image of their originals. So the corrupt and excrementitious humours in man are animated into Lice; and we may obſerve that Hogs, Sheep, Goats, Hawks, Hens and others, have one peculiar and proper kind of vermine; not reſembling themſelves according to ſeminal conditions, yet carrying a ſetled and confined habitude unto their corruptive originals. And therefore come not forth in generations erratical, or different from each other: but ſeem ſpecifically and in regular ſhapes to attend the corruption of their bodies, as do more perfect conceptions, the rule of ſeminal productions.

Generations equivocal, are yet commonly regular and of a determinate form or ſpecies.

The third affirmeth the roots of *Mandrakes* do make a noiſe, or give a ſhriek upon eradication; which is indeed ridiculous, and falſe below confute; ariſing perhaps from a ſmall and ſtridulous noiſe, which being firmly rooted, it maketh upon divulſion of parts. A ſlender foundation for ſuch a vaſt conception: for ſuch a noiſe we ſometime obſerve in other Plants, in Parſenips, Liquoriſh, Eryngium, Flags, and others.

The laſt concerneth the danger enſuing, That there follows an hazard of life to them that pull it up, that ſome evil fate purſues them, and they live not very long after. Therefore the attempt hereof among the Ancients, was not in

ordinary way: but as *Pliny* informeth, when they intended to take up the root of this Plant, they took the wind thereof, and with a ſword deſcribing three circles about it, they digged it up, looking toward the *Weſt*. A conceit not only injurious unto truth, and confutable by daily experience, but ſomewhat derogatory unto the providence of God; that is, not only to impoſe ſo deſtructive a quality on any Plant, but to conceive, a Vegetable, whoſe parts are uſeful unto many, ſhould in the only taking up prove mortal unto any. To think he ſuffereth the poiſon of *Nubia* to be gathered, *Napellus*, *Aconite*, and *Thora* to be eradicated, yet this not to be moved. That he permitteth Arſenick and mineral poiſons to be forced from the bowels of the Earth, yet not this from the ſurface thereof. This were to introduce a ſecond forbidden fruit, and inhance the firſt malediction, making it not only mortal for *Adam* to taſte the one, but capital unto his poſterity to eradicate or dig up the other.

Granum Nubæ.

Now what begot, at leaſt promoted ſo ſtrange conceptions, might be the magical opinion hereof; this being conceived the Plant ſo much in uſe with *Circe*, and therefore named *Circea*, as *Dioſcorides* and *Theophraſtus* have delivered, which being the eminent Sorcerers of elder ſtory, and by the magick of Simples believed to have wrought many wonders, ſome men were apt to invent, others to believe any tradition or magical promiſe thereof.

Analogous relations concerning other Plants, and ſuch as are of near affinity unto this, have made its current ſmooth, and paſs more eaſily among us. For the ſame effect is alſo delivered by *Joſephus*, concerning the root *Baaras*; by *Ælian* of *Cynoſpaſtus*; and we read in *Homer* the very ſame opinion concerning Moly,

Μῶλυ δὲ μὲν καλέουσι θεοὶ, χαλεπὸν δέ τ' ὀρύσσειν
Ἀνδράσι γε θνητοῖσι, θεοὶ δὲ τε πάντα δύνανται.

The Gods it Moly call, whoſe Root to dig away,
Is dangerous unto Man; but Gods, they all things may.

Now parallels or like relations alternately relieve each other, when neither will paſs aſunder, yet are they plauſible together; their mutual concurrences ſupporting their ſolitary inſtabilities.

Signaturiſts have ſomewhat advanced it; who ſeldom omitting what Ancients delivered; drawing into inference received diſtinctions of Sex, not willing to examine its humane reſemblance; and placing it in the form of ſtrange and magical Simples, have made men ſuſpect there was more therein, than ordinary practice allowed; and ſo became apt to embrace whatever they heard or read conformable unto ſuch conceptions.

Laſtly, The conceit promoteth it ſelf: for concerning an effect whoſe trial muſt coſt ſo dear, it fortifies it ſelf in that invention; and few there are whoſe experiment it need to fear. For (what is moſt contemptible) although not only the reaſon of any head, but experience of every hand may well convict it, yet will it not by divers be rejected; for prepoſſeſſed heads will ever doubt it, and timorous beliefs will never dare to trie it. So theſe Traditions how low and ridiculous ſoever, will find ſuſpition in ſome, doubt in others, and ſerve as teſts or trials of Melancholy and ſuperſtitious tempers for ever.

That Cinnamon, Ginger, Clove, *&c.* are not of the ſame tree.

2. That Cinnamon, Ginger, Clove, Mace, and Nutmeg, are but the ſeveral parts and fruits of the ſame Tree, is the common belief of thoſe which daily uſe them. Whereof to ſpeak diſtinctly, Ginger is the root of neither Tree nor Shrub, but of an herbaceous Plant, reſembling the Water Flower-Deluce, as *Garcias* firſt deſcribed; or rather the common Reed, as *Lobelius* ſince affirmed. Very common in many parts of *India*, growing either from Root or Seed, which in *December* and *January* they take up, and gently dried, roll it up in earth, whereby occluding the pores, they conſerve the natural humidity, and ſo prevent corruption.

Cinnamon

Cinnamon is the inward bark of a Cinnamon Tree, whereof the beſt is brought from *Zeilan*; this freed from the outward bark, and expoſed unto the Sun, contracts into thoſe folds wherein we commonly receive it. If it have not a ſufficient inſolation it looketh pale, and attains not its laudable colour; if it be ſunned too long, it ſuffereth a torrefaction, and deſcendeth ſomewhat below it.

Clove ſeems to be either the rudiment of a fruit, or the fruit it ſelf growing upon the Clove tree, to be found but in few Countries. The moſt commendable is that of the Iſles of *Molucca*; it is firſt white, afterward green, which beaten down, and dried in the Sun, becometh black, and in the complexion we receive it.

Nutmeg is the fruit of a Tree differing from all theſe, and as *Garcias* deſcribeth it, ſomewhat like a Peach; growing in divers places, but fructifying in the Iſle of *Banda*. The fruit hereof conſiſteth of four parts; the firſt or outward part is a thick and carnous covering like that of a Wal-nut. The ſecond a dry and floſculous coat, commonly called Mace. The third a harder tegument or ſhell, which lieth under the Mace. The fourth a Kernel included in the ſhell, which is the ſame we call Nutmeg. All which, both in their parts and order of diſpoſure, are eaſily diſcerned in thoſe fruits, which are brought in preſerves unto us.

Now if becauſe Mace and Nutmegs proceed from one Tree, the reſt muſt bear them company; or becauſe they are all from the *Eaſt-Indies*, they are all from one Plant: the Inference is precipitous, nor will there ſuch a Plant be found in the Herbal of Nature.

3. That *Viſcus Arboreus* or Miſſeltoe is bred upon Trees, from ſeeds which Birds, eſpecially Thruſhes and Ring-doves, let fall thereon, was the Creed of the Ancients, and is ſtill believed among us, is the account of its production, ſet down by *Pliny*, delivered by *Virgil*, and ſubſcribed by many more. If ſo, ſome reaſon muſt be aſſigned, why it groweth only upon certain Trees, and not upon many whereon theſe Birds do light. For as Exotick obſervers deliver, it groweth upon Almond-trees, Cheſnut, Apples, Oaks, and Pine-trees. As we obſerve in *England* very commonly upon Apple, Crabs, and White-thorn? ſometimes upon Sallow, Hazel, and Oak: rarely upon Aſh, Limetree, and Maple; never, that I could obſerve, upon Hölly, Elm, and many more. Why it groweth not in all Countries and places where theſe Birds are found; for ſo *Braſſavolus* affirmeth, it is not to be found in the Territory of *Ferrara*, and he was fain to ſupply himſelf from other parts of *Italy*: Why if it ariſeth from a ſeed, if ſown it will not grow again, as *Pliny* affirmeth, and as by ſetting the Berries thereof, we have in vain attempted its production; why if it cometh from ſeed that falleth upon the tree, it groweth often downwards, and puts forth under the bough, where ſeed can neither fall nor yet remain. Hereof beſide ſome others, the Lord *Verulam* hath taken notice. And they ſurely ſpeak probably who make it an arboreous excreſcence, or rather ſuper-plant, bred of a viſcous and ſuperfluous ſap which the tree it ſelf cannot aſſimilate. And therefore ſprouteth not forth in boughs and ſurcles of the ſame ſhape, and ſimilary unto the Tree that beareth it; but in a different form, and ſecondary unto its ſpecifical intention, wherein once failing, another form ſucceedeth: and in the firſt place that of Miſſeltoe, in Plants and Trees diſpoſed to its production. And therefore alſo where-ever it groweth, it is of conſtant ſhape, and maintains a regular figure; like other ſupercreſcences, and ſuch as living upon the ſtock of others, are termed paraſitical Plants, as Polypody, Moſs, the ſmaller Capillaries, and many more: So that ſeveral regions produce ſeveral Miſſeltoes: *India* one, *America* another, according to the law and rule of their degenerations.

What the Miſſeltoe in ſome Trees is.

Now what begot this conceit, might be the enlargement of ſome part of truth contained in its ſtory. For certain it is, that ſome Birds do feed upon the berries of this Vegetable, and we meet in *Ariſtotle* with one kind of Truſh called the Miſſel Truſh, or feeder upon Miſſeltoe. But that which hath moſt promoted it, is a received proverb, *Turdus ſibi malum cacat*; appliable

ἰξοφάγος

unto ſuch men as are authors of their own misfortune. For according unto ancient tradition and *Pliny*'s relation, the Bird not able to digeſt the fruit whereon ſhe feedeth; from her inconverted muting ariſeth this Plant, of the Berries whereof Birdlime is made, wherewith ſhe is after entangled. But although Proverbs be popular principles, yet is not all true that is proverbial; and in many thereof, there being one thing delivered, and another intended; though the verbal expreſſion be falſe, the Proverb is true enough in the verity of its intention.

Paganiſh ſuperſtition about the Miſſeltoe of the Oak.

As for the Magical vertues in this Plant, and conceived efficacy unto veneficial intentions, it ſeemeth a *Pagan* relique derived from the ancient *Druides*, the great admirers of the Oak, eſpecially the Miſſeltoe that grew thereon; which according unto the particular of *Pliny*, they gathered with great ſolemnity. For after ſacrifice, the Prieſt in a white garment aſcended the Tree, cut down the Miſſeltoe with a golden hook, and received it in a white coat; the vertue whereof was to reſiſt all poiſons, and make fruitful any that uſed it. Vertues not expected from Claſſical practice; and did they fully anſwer their promiſe which are ſo commended, in Epileptical intentions, we would abate theſe qualities. Country practice hath added another, to provoke the after-birth, and in that caſe the decoction is given unto Cows. That the Berries are poiſon, as ſome conceive, we are ſo far from averring, that we have ſafely given them inwardly; and can confirm the experiment of *Braſſavolus*, that they have ſome purgative quality.

4. The Roſe of *Jericho*, that flouriſhes every year juſt about Chriſtmas Eve, is famous in Chriſtian reports; which notwithſtanding we have ſome reaſon to doubt, and are plainly informed by *Bellonius*, it is but a Monaſtical impoſture, as he hath delivered in his obſervations, concerning the Plants in *Jericho*. That which promoted the conceit, or perhaps begot its continuance, was a propriety in this Plant. For though it be dry, yet will it upon imbibition of moiſture dilate its leaves, and explicate its flowers contracted, and ſeemingly dried up. And this is to be effected not only in the Plant yet growing, but in ſome manner alſo in that which is brought exſuccous and dry unto us. Which quality being obſerved, the ſubtilty of contrivers did commonly play this ſhew upon the Eve of our Saviours Nativity, when by drying the Plant again, it cloſed the next day, and ſo pretended a double myſtery, referring unto the opening and cloſing of the womb of *Mary*.

Cap. 24.

φυλὰ τῶ ῥόδω.

There wanted not a ſpecious confirmation from a text in *Eccleſiaſticus*, *Quaſi palma exaltata ſum in Cades, & quaſi plantatio Roſæ in Jericho*: I was exalted like a Palm-tree in *Engaddi*, and as a Roſe in *Jericho*. The ſound whereof in common ears, begat an extraordinary opinion of the Roſe of that denomination. But herein there ſeemeth a miſtake: for by the Roſe in the Text, is implied the true and proper Roſe, as firſt the Greek, and ours accordingly rendreth it. But that which paſſeth under this name, and by us is commonly called the Roſe of *Jericho*, is properly no Roſe, but a ſmall thorny ſhrub or kind of Heath, bearing little white flowers, far differing from the Roſe; whereof *Bellonius* a very inquiſitive *Herbaliſt*, could not find any in his travels thorow *Jericho*. A Plant ſo unlike a Roſe, it hath been miſtaken by ſome good *Simpliſt* for *Amomum*; which truly underſtood, is ſo unlike a Roſe, that as *Dioſcorides* delivers, the flowers thereof are like the white Violet, and its leaves reſemble *Briony*.

Suitable unto this relation almoſt in all points is that of the Thorn at *Glaſſenbury*, and perhaps the daughter thereof; herein our endeavours as yet have not attained ſatisfaction, and cannot therefore enlarge. Thus much in general we may obſerve, that ſtrange effects, are naturally taken for miracles by weaker heads, and artificially improved to that apprehenſion by wiſer. Certainly many precocious Trees, and ſuch as ſpring in the Winter, may be found in moſt parts of *Europe*, and divers alſo in *England*. For moſt Trees do begin to ſprout in the Fall of the leaf or Autumn, and if not kept back by cold and outward cauſes, would leaf about the Solſtice. Now if it happen that any be ſo ſtrongly conſtituted, as to make this good againſt the power

Such a Thorn there is in *Parham* Park in *Suffolk*, and elſewhere.

of

of Winter they may produce their Leaves or Bloſſoms in that Seaſon. And perform that in ſome ſingles, which is obſervable in whole kinds; as in *Ivy*, which bloſſoms and bears at leaſt twice a year, and once in the Winter; as alſo in *Furz*, which flowereth in that Seaſon.

5. That *Ferrum Equinum*, or *Sferra Cavallo* hath a vertue attractive of Iron, a power to break Locks, and draw off the Shoos of a Horſe that paſſeth over it: Whether you take it for one kind of *Securidaca*, or will alſo take in *Lunaria*, we know it to be falſe: and cannot but wonder at *Matthiolus*, who upon a parallel in *Pliny* was ſtaggered into ſuſpenſion. Who notwithſtanding in the imputed vertue to open things, cloſe and ſhut up, could laugh himſelf at that promiſe from the Herb *Æthiopis* or *Æthiopian* Mullein; and condemn the Judgment of *Scipio*, who having ſuch a Pick-Lock, would ſpend ſo many Years in battering the Gates of *Carthage*. Which ſtrange and Magical Conceit, ſeems to have no deeper root in Reaſon, than the Figure of its Seed; for therein indeed it ſomewhat reſembles a Horſe-Shoe; which notwithſtanding *Baptiſta Porta* hath thought too low a ſignification, and raiſed the ſame unto a Lunary repreſentation.

6. That *Bayes* will protect from the miſchief of Lightning and Thunder, is a Quality aſcribed thereto, common with the Fig-tree, Eagle, and Skin of a Seal. Againſt ſo famous a quality, *Vicomercatus* produceth Experiment of a Bay-tree blaſted in *Italy*. And therefore although *Tiberius* for this intent did wear a Laurel upon his Temples; yet did *Auguſtus* take a more probable courſe, who fled under Arches and hollow Vaults for protection. And though *Porta* conceive, becauſe in a ſtreperous eruption, it riſeth againſt Fire, it doth therefore reſiſt Lightning, yet is that no emboldening Illation. And if we conſider the threefold effect of *Jupiter's* Triſulk, to burn, diſcuſs and terebrate; and if that be true which is commonly delivered, That it will melt the Blade, yet paſs the Scabbard; kill the Child, yet ſpare the Mother; dry up the Wine, yet keep the Hogſhead entire: Though it favour the Amulet, it may not ſpare us; it will be unſure to rely on any preſervative, 'tis no ſecurity to be dipped in Styx, or clad in the Armour of *Ceneus*. Now that Beer, Wine, and other Liquors, are ſpoiled with Lightning and Thunder, we conceive it proceeds not only from noiſe and concuſſion of the air, but alſo noxious Spirits which mingle therewith, and draw them to corruption; whereby they become not only dead themſelves, but ſometimes deadly unto others, as that which *Seneca* mentioneth; whereof whoſoever drank, either loſt his life, or elſe his Wits upon it.

How Beer and Wine come to be ſpoiled by Lightning.

7. It hath much deceived the hopes of good Fellows, what is commonly expected of bitter Almonds, and though in *Plutarch* confirmed from the practice of *Claudius* his Phyſician, that Antidote againſt Ebriety hath commonly failed. Surely Men much verſed in the practice do err in the theory of inebriation; conceiving in that diſturbance the Brain doth only ſuffer from exhalations and vaporous aſcenſions from the Stomach, which fat and oyly ſubſtances may ſuppreſs. Whereas the prevalent intoxication is from the Spirits of Drink diſperſed into the Veins and Arteries; from whence by common conveyances they creep into the Brain, inſinuate into its Ventricles, and beget thoſe Vertigoes, accompanying that Perverſion. And therefore the ſame effect may be produced by a Gliſter, the Head may be intoxicated by a Medicine at the Heel. So the poiſonous bites of Serpents, although on parts at diſtance from the Head. Yet having entered the Veins, diſturb the Animal Faculties, and produce the effects of Drink, or Poiſon ſwallowed. And ſo as the Head may be diſturbed by the Skin, it may the ſame way be relieved; as is obſerveable in Balneations, Waſhings and Fomentations, either of the whole Body, or of that part alone.

How Drinks intoxicate or overcome Men.

CHAP.

CHAP. VII.

Of ſome Inſects, and the properties of ſeveral Plants.

1. FEw Ears have eſcaped the noiſe of the Dead-Watch, that is, the little clickling ſound heard often in many Rooms, ſomewhat reſembling that of a Watch; and this is conceived to be of an evil omen or prediction of ſome perſons death: Wherein notwithſtanding there is nothing of rational Preſage or juſt cauſe of terror unto melancholy and meticulous Heads. For this noiſe is made by a little ſheathwinged grey Inſect, found often in Wainſcot, Benches and Wood-work, in the Summer. We have taken many thereof, and kept them in thin Boxes, wherein I have heard and ſeen them work and knack with a little *proboſcis* or trunk againſt the ſide of the Box, like *Apicus Martius*, or Woodpecker againſt a Tree. It worketh beſt in warm weather, and for the moſt part giveth not over under nine or eleven ſtroaks at a time. He that could extinguiſh the terrifying apprehenſions hereof, might prevent the paſſions of the Heart, and many cold ſweats in Grandmothers and Nurſes, who in the ſickneſs of Children, are ſo ſtartled with theſe noiſes.

2. The preſage of the Year ſucceeding, which is commonly made from Inſects or little Animals in Oak Apples, according to the kinds thereof either Maggot, Fly or Spider; that is, of Famine, War or Peſtilence; whether we mean that woody Excreſcence, which ſhooteth from the Branch about *May*, or that round and Apple-like accretion which groweth under the Leaf about the latter end of Summer, is I doubt too diſtinct, nor verifiable from event.

For Flies and Maggots are found every year, very ſeldome Spiders: And *Helmont* affirmeth, He could never find the Spider and the Fly upon the ſame Trees, that is the ſigns of War and Peſtilence, which often go together: Beſide, That the Flies found were at firſt Maggots, experience hath informed us; for keeping theſe Excreſcencies, we have obſerved their converſions, beholding in Magnifying Glaſſes the daily progreſſion thereof. As may be alſo obſerved in other Vegetable excretions, whoſe Maggots do terminate in Flies of conſtant ſhapes; as in the Nutgalls of the Out-landiſh Oak, and the moſſie Tuft of the wild Briar; which having gathered in *November* we have found the little Maggots which lodged in wooden Cells all *Winter*, to turn into Flies in *June*.

We confeſs the Opinion may hold ſome verity in the Analogy, or Emblematical phancy. For Peſtilence is properly ſignified by the Spider, whereof ſome kinds are of a very venomous nature. Famine by Maggots, which deſtroy the Fruits of the Earth. And War not improperly by the Fly; if we reſt in the phancy of *Homer*, who compares the valiant *Grecian* unto a Fly.

Sme verity it may alſo have in it ſelf, as truly declaring the corruptive conſtitution in the preſent Sap and nutrimental Juice of the Tree; and may conſequently diſcover the diſpoſition of that Year, according to the plenty or kinds of theſe productions. For if the putrefying Juices of Bodies bring forth plenty of Flies and Maggots, they give forth teſtimony of common Corruption, and declare that the Elements are full of the Seeds of Putrefaction, as the great number of Caterpillars, Gnats and ordinary Inſects do alſo declare. If they run into Spiders, they give ſigns of higher Putrefaction, as plenty of Vipers and Scorpions are confeſſed to do; the putrefying Materials producing Animals of higher miſchiefs, according to the advance and higher ſtrain of corruption.

Abundance of Flies, Maggots, *&c.* what may they naturally ſignifie.

3. Whe-

3. Whether all Plants have Seed, were more eaſily determinable, if we could conclude concerning Harts-Tongue, Fern, the Capillaries, *Lunaria*, and ſome others. But whether thoſe little duſty Particles, upon the lower ſide of the Leaves, be Seeds and Seminal Parts; or rather, as it is commonly conceived, Excremental Separations; we have not as yet been able to determine by any germination or univocal production from them when they have been ſowed on purpoſe: But having ſet the Roots of Harts-Tongue in a Garden, a Year or two after there came up three or four of the ſame Plants, about two yards diſtance from the firſt. Thus much we obſerve, That they ſeem to renew yearly, and come not fully out till the Plant be in its vigour, and by the help of Magnifying Glaſſes, we find theſe duſty Atoms to be round at firſt, and fully repreſenting Seeds, out of which at laſt proceed little Mites almoſt inviſible; ſo that ſuch as are old ſtand open, as being emptied of ſome Bodies formerly included; which though diſcernable in Harts-Tongue, is more notoriouſly diſcoverable in ſome differences of Brake or Fern.

But exquiſite Microſcopes and Magnifying Glaſſes have at laſt cleared this doubt, whereby alſo long ago the noble *Fredericus Cæſius* beheld the duſts of Polypody as bigg as Pepper Corns; and as *Johannes Faber* teſtifieth, made draughts on Paper of ſuch kind of Seeds, as bigg as his Glaſſes repreſented them: and ſet down ſuch Plants under the Claſſis of *Herbæ Tergifætæ*, as may be obſerved in his notable Botanical Tables.

4. Whether the Sap of Trees runs down to the Roots in Winter, whereby they become naked and grow not; or whether they do not ceaſe to draw any more, and reſerve ſo much as ſufficeth for conſervation, is not a Point indubitable. For we obſerve, That moſt Trees, as though they would be perpetually green, do bud at the fall of the Leaf, although they ſprout not much forward until the Spring, and warmer Weather approacheth; and many Trees maintain their Leaves all Winter, although they ſeem to receive very ſmall advantage in their growth. But the Sap doth powerfully riſe in the Spring, to repair that moiſture whereby they barely ſubſiſted in the Winter, and alſo to put the Plant in a capacity of Fructification: He that hath beheld how many gallons of Water may in a ſmall time be drawn from a Birch-Tree in the Spring, hath ſlender reaſon to doubt.

5. That *Camphire* Eunuchates, or begets in Men an impotency unto Venery, obſervation will hardly confirm; and we have found it to fail in Cocks and Hens, though given for many days; which was a more favourable trial than that of *Scaliger*, when he gave it unto a Bitch that was proud. For the inſtant turgeſcence is not to be taken off, but by Medicines of higher Natures; and with any certainty but one way that we know, which notwithſtanding, by ſuppreſſing that natural evacuation, may encline unto Madneſs, if taken in the Summer.

6. In the Hiſtory of Prodigies we meet with many ſhowers of Wheat; how true or probable, we have not room to debate. Only thus much we ſhall not omit to inform, That what was this Year found in many places, and almoſt preached for Wheat rained from the Clouds, was but the Seed of Ivy-berries, which ſomewhat repreſent it; and though it were found in Steeples and high places, might be conveyed thither, or muted out by Birds: For many feed thereon, and in the Crops of ſome we have found no leſs than three ounces.

7. That every Plant might receive a Name according unto the Diſeaſe it cureth, was the wiſh of *Paracelſus*, a way more likely to multiply Empiricks than Herbaliſts: Yet what is practiſed by many is advantagious unto neither; that is, Relinquiſhing their proper Appellations to re-baptize them by the name of Saints, Apoſtles, Patriarchs and Martyrs, to call this the Herb of *John*, that of *Peter*, this of *James* or *Joſeph*, that of *Mary* or *Barbara*. For hereby apprehenſions are made additional unto their proper Natures; whereon ſuperſtitious practices enſue; and Stories are framed accordingly to make good their foundations.

8. We

8. We cannot omit to declare the groſs miſtake of many in the Nominal apprehenſion of Plants; to inſtance but in few. An Herb there is commonly called *Betonica Pauli*, or *Paul's Betony*; hereof the people have ſome conceit in reference to S. *Paul*; whereas indeed that Name is derived from *Paulus Ægineta*, an antient Phyſician of *Ægina*, and is no more than Speedwell, or *Fluellin*. The like expectations are raiſed from *Herba Trinitatis*; which notwithſtanding obtaineth that name from the figure of its leaves, and is one kind of Liverwort, or *Hepatica*. In *Milium Solis*, the Epithete of the Sun hath enlarged its Opinion; which hath indeed no reference thereunto, it being no more than *Lithoſpermon*, or *Grummel*, or rather *Milium Soler*; which as *Serapion* from *Aben Juliel* hath taught us, Becauſe it grew plentifully in the Mountains of *Soler*, received that appellation. In Jews-Ears ſomething is conceived extraordinary from the Name, which is in propriety but *Fungus ſambucinus*, or an excreſcence about the Roots of Elder, and concerneth not the Nation of the *Jews*, but *Judas Iſcariot*, upon a conceit he hanged on this Tree; and is become a famous Medicine in Quinſies, ſore Throats and Strangulations ever ſince. And ſo are they deceived in the name of Horſe-Raddiſh, Horſe-Mint, Bull-Ruſh, and many more: conceiving therein ſome prenominal conſideration, whereas indeed that expreſſion is but a Greciſm, by the prefix of *Hippos* and *Bous*, that is, Horſe and Bull, intending no more than Great. According whereto the great Dock is called *Hippolapathum*; and he that calls the Horſe of *Alexander*, *Great-head*, expreſſeth the ſame which the *Greeks* do in *Bucephalus*.

Why the Jews Ear is uſed for ſore Throats.

9. Laſtly, Many things are delivered and believed of other Plants, wherein at leaſt we cannot but ſuſpend. That there is a property in *Baſil* to propagate Scorpions, and that by the ſmell thereof they are bred in the Brains of Men, is much advanced by *Hollerius*, who found this Inſect in the Brains of a Man that delighted much in that ſmell. Wherein beſide that we find no way to conjoyn the effect unto the cauſe aſſigned; herein the Moderns ſpeak but timorouſly, and ſome of the Antients quite contrarily. For according unto *Oribaſius*, Phyſician unto *Julian*; The *Africans*, Men beſt experienced in Poyſons, affirm, whoſoever hath eaten *Baſil*, although he be ſtung with a Scorpion, ſhall feel no pain thereby: which is a very different effect, and rather antidotally deſtroying, than ſeminally promoting its production.

That the Leaves of *Cataputia* or Spurge, being plucked upward or downward, reſpectively perform their operations by Purge or Vomit, as ſome have written, and old Wives ſtill do preach, is a ſtrange conceit, aſcribing unto Plants poſitional operations, and after the manner of the Loadſtone; upon the Pole whereof if a Knife be drawn from the Handle unto the Point, it will take up a Needle; but if drawn again from the Point to the Handle, it will attract it no more.

That Cucumbers are no commendable Fruits, that being very wateriſh, they fill the Veins with crude and windy ſeroſities; that containing little Salt or Spirit, they may alſo debilitate the vital acidity, and fermental faculty of the Stomach, we readily concede. But that they ſhould be ſo cold, as be almoſt Poyſon by that quality, it will be hard to allow, without the contradiction of *Galen*: who accounteth them cold but in the ſecond degree, and in that Claſſis have moſt Phyſicians placed them.

In his *Anatomia Sambuci.*

That Elder Berries are Poyſon, as we are taught by Tradition, experience will unteach us. And beſides the Promiſes of *Blochwitius*, the healthful effects thereof daily obſerved will convict us.

That an Ivy Cup will ſeparate Wine from Water, if filled with both, the Wine ſoaking through, but the Water ſtill remaining, as after *Pliny* many have averred, we know not how to affirm; who making trial thereof, found both the Liquors to ſoak indiſtinctly through the Bowl.

That Sheep do often get the Rot, by feeding in boggy Grounds where *Ros-ſolis* groweth, ſeems beyond diſpute. That this Herb is the cauſe thereof, Shepherds affirm and deny; whether it hath a cordial vertue by ſudden refection, ſenſible experiment doth hardly confirm, but that it may have a balſamical

Balſamical and reſumptive Vertue, whereby it becomes a good Medicine in Catarrhs and conſumptive Diſpoſitions, Practice and Reaſon conclude. That the lentous Drops upon it are not extraneous, and rather an exudation from it ſelf, than a rorid concretion from without; beſide other grounds, we have reaſon to conceive: for having kept the Roots moiſt and earthed in cloſe Chambers, they have, though in leſſer plenty, ſent out theſe Drops as before.

That *Flos Africanus* is Poyſon, and deſtroyeth Dogs, in two Experiments we have not found.

That Yew and the Berries thereof are harmleſs, we know.

That a Snake will not endure the ſhade of an Aſh we can deny. Nor is it inconſiderable what is affirmed by *Bellonius*: for if his Aſſertion be true, our Apprehenſion is oftentimes wide in ordinary Simples, and in common uſe we miſtake one for another. We know not the true Thyme; the Savory in our Gardens, is not that commended of old; and that kind of Hyſſop the Antients uſed, is unknown unto us, who make great uſe of another. *Lib. 1. Obſervat.*

We omit to recite the many Vertues and endleſs Faculties aſcribed unto Plants, which ſometime occur in grave and ſerious Authors; and we ſhall make a bad tranſaction for Truth to concede a verity in half. To reckon up all, it were imployment for *Archimedes*, who undertook to write the number of the Sands. Swarms of others there are, ſome whereof our future endeavours may diſcover; common Reaſon I hope will ſave us a labour in many: Whoſe Abſurdities ſtand naked unto every Eye; Errours not able to deceive the Embleme of Juſtice, and need no *Argus* to deſcry them. Herein there ſurely wants expurgatory animadverſions, whereby we might ſtrike out great numbers of hidden qualities; and having once a ſerious and conceded liſt, we might with more encouragement and ſafety, attempt their Reaſons.

THE THIRD BOOK.

Of Divers popular and received Tenets concerning Animals, which examined, prove either false or dubious.

CHAP. I.

Of the Elephant.

THE first shall be of the Elephant, whereof there generally passeth an opinion it hath no joynts; and this absurdity is seconded with another, that being unable to lie down, it sleepeth against a Tree; which the Hunters observing, do saw it almost asunder; whereon the Beast relying, by the fall of the Tree, falls also down it self, and is able to rise no more. Which conceit is not the daughter of later times, but an old and gray-headed error, even in the days of *Aristotle*, as he delivereth in his Book, *De incessu Animalium*, and stands successively related by several other Authors: by *Diodorus Siculus*, *Strabo*, *Ambrose*, *Cassiodore*, *Solinus*, and many more. Now herein methinks men much forget themselves, not well considering the absurdity of such assertions.

For first, they affirm it hath no joints, and yet concede it walks and moves about; whereby they conceive there may be a progression or advancement made in Motion without inflexion of parts. Now all progression or Animal locomotion being (as *Aristotle* teacheth) performed *tractu & pulsu*; that is, by drawing on, or impelling forward some part which was before in station, or at quiet; where there are no joints or flexures, neither can there be these actions. And this is true, not only in Quadrupedes, Volatils, and Fishes, which have distinct and prominent Organs of Motion, Legs, Wings, and Fins; but in such also as perform their progression by the Trunk, as Serpents, Worms, and Leeches. Whereof though some want bones,

How Progression is made in animals.

* Joint-like Parts.

bones, and all extended articulations, yet have they * arthritical Analogies, and by the motion of fibrous and musculous parts, are able to make progression. Which to conceive in bodies inflexible, and without all protrusion of parts, were to expect a Race from *Hercules* his pillars; or hope to behold the effects of *Orpheus* his Harp, when trees found joynts, and danced after his Musick.

Again, While men conceive they never lie down, and enjoy not the position of rest, ordained unto all pedestrious Animals, hereby they imagine (what Reason cannot conceive) that an Animal of the vastest dimension and longest duration, should live in a continual motion, without that alternity and vicissitude of rest whereby all others continue; and yet must thus much come to pass, if we opinion they lye not down and enjoy no decumbence at all. For station is properly no rest, but one kind of motion, relating unto that which Physicians (from *Galen*) do name extensive or tonical; that is, an extension of the muscles and organs of motion maintaining the body at length or in its proper figure.

Extensive or Tonical Motion, what?

Wherein although it seem to be unmoved, it is not without all Motion; for in this position the muscles are sensibly extended, and labour to support the body; which permitted unto its proper gravity, would suddenly subside and fall unto the earth; as it happeneth in sleep, diseases, and death. From which occult action and invisible motion of the muscles in station (as *Galen* declareth) proceed more offensive lassitudes than from ambulation. And therefore the Tyranny of some have tormented men with long and enforced station, and though *Ixion* and *Sisyphus* which always moved, do seem to have the hardest measure; yet was not *Tityus* favoured, that lay extended upon *Caucasus*; and *Tantalus* suffered somewhat more than thirst, that stood perpetually in Hell. Thus *Mercurialis* in his Gymnasticks justly makes standing one kind of exercise: and *Galen* when we lie down, commends unto us middle figures, that is, not to lye directly, or at length, but somewhat inflected, that the muscles may be at rest; for such as he termeth *Hypobolemaioi* or figures of excess, either shrinking up or stretching out, are wearisome positions, and such as perturb the quiet of those parts. Now various parts do variously discover these indolent and quiet positions, some in right lines, as the wrists: some at right angles, as the cubit: others at oblique angles, as the fingers and the knees: all resting satisfied in postures of moderation, and none enduring the extremity of flexure or extension.

Moreover men herein do strangely forget the obvious relations of history, affirming they have no joints, whereas they dayly read of several actions which are not performable without them. They forget what is delivered by *Xiphilinus*, and also by *Suetonius* in the lives of *Nero* and *Galba*, that Elephants have been instructed to walk on ropes, in publick shews before the people. Which is not easily performed by man, and requireth not only a broad foot, but a pliable flexure of joints, and commandable disposure of all parts of progression. They pass by that memorable place in *Curtius*, concerning the Elephant of King *Porus*, *Indus qui Elephantem regebat, descendere eum ratus, more solito procumbere jussit in genua, cæteri quoque (itu enim instituti erant) demisere corpora in terram.* They remember not the expression of *Osorius*, when he speaks of the Elephant presented to *Leo* the tenth, *Pontificem ter genibus flexis, & demisso corporis habitu venerabundus salutavit.* But above all, they call not to mind that memorable shew of *Germanicus*, wherein twelve Elephants danced unto the sound of Musick, and after laid them down in the *Triclinium*, or places of festival Recumbency.

De rebus gestis Emanuelis.

Τόνυ from γόνια.

They forget the Etymologie of the Knee, approved by some Grammarians. They disturb the position of the young ones in the womb: which upon extension of legs is not easily conceivable; and contrary unto the general contrivance of Nature. Nor do they consider the impossible exclusion thereof, upon extension and rigour of the legs.

Lastly, they forget or consult not experience, whereof not many years past, we have had the advantage in *England*, by an Elephant shewn in many parts thereof, not only in the posture of standing, but kneeling and

and lying down. Whereby although the opinion at preſent be well ſuppreſſed, yet from ſome ſtrings of tradition, and fruitful recurrence of errour, it is not improbable, it may revive in the next generation again. This being not the firſt that hath been ſeen in *England*; for (beſides ſome others) as *Polydore Virgil* relateth, *Lewis* the French King ſent one to *Henry* the third, and *Emanuel* of *Portugal* another to *Leo* the tenth into *Italy*, where notwithſtanding the errour is ſtill alive and epidemical, as with us.

The hint and ground of this opinion might be the groſs and ſomewhat * Cylindrical compoſure of the legs, the equality and leſs perceptible diſpoſure of the joynts, eſpecially in the former legs of this Animal; they appearing when he ſtandeth, like Pillars of fleſh, without any evidence of articulation. The different flexure and order of the joints might alſo countenance the ſame, being not diſpoſed in the Elephant, as they are in other quadrupedes, but carry a nearer conformity unto thoſe of Man; that is, the bought of the fore-legs, not directly backward, but laterally and ſomewhat inward; but the hough or ſuffraginous flexure behind rather outward. Somewhat different unto many other quadrupedes, as Horſes, Camels, Deer, Sheep, and Dogs; for their fore-legs bend like our legs, and their hinder legs like our arms, when we move them to our ſhoulders. But quadrupedes oviparous, as Frogs, Lizards, Crocodiles, have their joints and motive flexures more analogouſly framed unto ours: and ſome among viviparous, that is, ſuch thereof as can bring their forefeet and meat therein unto their mouths, as moſt can do that have the clavicles or collar-bones: whereby their breaſts are broader, and their ſhoulders more aſunder, as the Ape, the Monkey, the Squirrel and ſome others. If therefore any ſhall affirm the joints of Elephants are differently framed from moſt of other quadrupedes, and more obſcurely and groſly almoſt than any, he doth herein no injury unto truth. But if *à dicto ſecundùm quid ad dictum ſimpliciter*, he affirmeth alſo they have no articulations at all, he incurs the controulment of reaſon, and cannot avoid the contradiction alſo of ſenſe.

* Round, Pillar-like.

As for the manner of their venation, if we conſult hiſtorical experience, we ſhall find it to be otherwiſe than as is commonly preſumed, by ſawing away of Trees. The accounts whereof are to be ſeen at large in *Johannes*, *Hugo*, *Edwardus Lopez*, *Garcias ab horto*, *Cadamuſtus*, and many more.

Other concernments there are of the Elephant, which might admit of diſcourſe, and if we ſhould queſtion the teeth of Elephants, that is, whether they be properly ſo termed, or might not rather be called horns; it were no new enquiry of mine, but a Paradox as old as *Oppianus*. Whether, as *Pliny* and divers ſince affirm it, that Elephants are terrified and make away upon the grunting of Swine, *Garcias ab horto* may decide, who affirmeth upon experience, they enter their ſtalls, and live promiſcuouſly in the Woods of *Malavar*. That the ſituation of the genitals is averſe, and their copulation like that which ſome believe of Camels, as *Pliny* hath alſo delivered, is not to be received; for we have beheld that part in a different poſition; and their coition is made by ſuperſaliency, like that of horſes, as we are informed by ſome who have beheld them in that act. That ſome Elephants have not only written whole ſentences, as *Ælian* ocularly teſtifieth, but have alſo ſpoken, as *Oppianus* delivereth, and *Chriſtophorus à Coſta* particularly relateth; although it ſound like that of *Achilles*'s Horſe in *Homer*, we do not conceive impoſſible: Nor beſide the affinity of reaſon in this Animal, any ſuch intolerable incapacity in the organs of divers quadrupedes, whereby they might not be taught to ſpeak, or become imitators of ſpeech like Birds. Strange it is how the curioſity of men that have been active in the inſtruction of Beaſts, have never fallen upon this artifice; and among thoſe many paradoxical and unheard of imitations, ſhould not attempt to make one ſpeak. The Serpent that ſpake unto *Eve*, the Dogs and Cats that uſually ſpeak unto Witches, might afford ſome encouragement. And ſince broad and thick chaps are required in Birds that ſpeak, ſince lips and teeth are alſo organs of ſpeech; from theſe there is alſo an ad-

Cynget. lib. 2.

Some *Brutes* tolerably well organized for ſpeech, and approaching to Reaſon.

vantage

vantage in Quadrupedes, and a proximity of Reaſon in Elephants and Apes, above them all. Since alſo an Echo will ſpeak without any Mouth at all, articulately returning the Voice of Man, by only ordering the Vocal Spirit in concave and hollow places; whether the muſculous and motive parts about the hollow Mouths of Beaſts, may not diſpoſe the paſſing Spirit into ſome articulate Notes, ſeems a query of no great doubt.

CHAP. II.

Of the Horſe.

THe ſecond Aſſertion, That an Horſe hath no Gall, is very general, nor only ſwallowed by the people and common Farriers, but alſo received by good *Veterinarians*, and ſome who have laudably diſcourſed upon Horſes. It ſeemeth alſo very antient; for it is plainly ſet down by *Ariſtotle*, An Horſe and all ſolid ungulous or whole-hoofed Animals have no Gall; and the ſame is alſo delivered by *Pliny*, which notwithſtanding we find repugnant unto Experience and Reaſon. For firſt, it calls in queſtion the Providence or wiſe Proviſion of Nature; who not abounding in ſuperfluities, is neither deficient in Neceſſities. Wherein nevertheleſs there would be a main defect, and her Improviſion juſtly accuſable; if ſuch a feeding Animal, and ſo ſubject unto Diſeaſes from bilious cauſes, ſhould want a proper conveyance for choler; or have no other receptacle for that Humour than the Veins, and general maſs of Blood.

Veterinarians or Farriers.

It is again controulable by Experience, for we have made ſome ſearch and enquiry herein; encouraged by *Abſyrtus* a Greek Author, in the time of *Conſtantine*, who in his Hippiatricks, obſcurely aſſigneth the Gall a place in the Liver; but more eſpecially by *Carlo Ruini* the *Bononian*, who in his *Anatomia del Cavallo*, hath more plainly deſcribed it, and in a manner as I found it. For in the particular enquiry into that part, in the concave or ſimous part of the Liver, whereabout the Gall is uſually ſeated in Quadrupedes, I diſcover an hollow, long and membranous ſubſtance, of a pale colour without, and lined with Choler and Gall within; which part is by branches diffuſed into the lobes and ſeveral parcels of the Liver; from whence receiving the fiery ſuperfluity, or cholerick remainder, by a manifeſt and open paſſage, it conveyeth it into the *duodenum* or upper gut, thence into the lower Bowels; which is the manner of its derivation in Man and other Animals. And therefore although there be no eminent and circular follicle; no round Bag or Veſicle which long containeth this Humour: Yet is there a manifeſt receptacle and paſſage of Choler from the Liver into the Guts: which being not ſo ſhut up, or at leaſt not ſo long detained, as it is in other Animals; procures that frequent excretion, and occaſions the Horſe to dung more often than many other, which conſidering the plentiful feeding, the largeneſs of the Guts, and their various circumvolution, was prudently contrived by Providence in this Animal. For Choler is the natural Gliſter, or one excretion whereby Nature excludeth another; which deſcending daily into the Bowels, extimulates thoſe parts, and excites them unto expulſion. And therefore when this humour aboundeth or corrupteth, there ſucceeds oft-times a *cholerica paſſio*, that is, a ſudden and vehement Purgation upward and downward: and when the paſſage of Gall becomes obſtructed, the Body grows coſtive, and the Excrements of the Belly white; as it happeneth in the Jaundice.

Medicina equaria.

Choler the natural Gliſter.

If

If any therefore affirm an Horſe hath no Gall, that is, no receptacle or part ordained for the ſeparation of Choler, or not that Humour at all; he hath both Senſe and Reaſon to oppoſe him. But if he ſaith it hath no Bladder of Gall, and ſuch as is obſerved in many other Animals, we ſhall oppoſe our Senſe if we gain-ſay him. Thus muſt *Ariſtotle* be made out when he denyeth this part; by this diſtinction we may relieve *Pliny* of a contradiction, who in one place affirming an Horſe hath no Gall, delivereth yet in another, That the Gall of an Horſe was accounted Poyſon; and therefore at the Sacrifices of Horſes in *Rome*, it was unlawful for the * *Flamen* to touch it. But with more difficulty, or hardly at all is that reconcileable which is delivered by our Countryman, and received *Veterinarian*; whoſe Words in his Maſter-Piece, and Chapter of Diſeaſes from the Gall, are ſomewhat too ſtrict, and ſcarce admit a Reconciliation. The fallacy therefore of this conceit is not unlike the former; *A dicto ſecundum quid ad dictum ſimpliciter.* Becauſe they have not a Bladder of Gall, like thoſe we uſually obſerve in others, they have no Gall at all. Which is a Paralogiſm not admittable; a fallacy that dwells not in a Cloud, and needs not the Sun to ſcatter it.

* Prieſt.

CHAP. III.

Of the Dove

THe third Aſſertion is ſomewhat like the ſecond, that a Dove or Pigeon hath no Gall; which is affirmed from very great Antiquity; for as *Pierius* obſerveth, From this conſideration the Ægyptians did make it the Hieroglyphick of Meekneſs. It hath been averred by many holy Writers, commonly delivered by *Poſtillers* and *Commentators*; who from the frequent mention of the Dove in the *Canticles*, the precept of our Saviour, To be wiſe as Serpents and innocent as Doves; and eſpecially the appearance of the Holy Ghoſt in the ſimilitude of this Animal, have taken occaſion to ſet down many affections of the Dove, and what doth moſt commend it, is, That it hath no Gall. And hereof have made uſe not only minor Divines, but *Cyprian*, *Auſtin*, *Iſidore*, *Beda*, *Rupertus*, *Janſenius*, and many more.

Whereto notwithſtanding we know not how to aſſent, it being repugnant unto the Authority and poſitive determination of antient Philoſophy. The affirmative of *Ariſtotle* in his Hiſtory of Animals is very plain, *Fel aliis ventri, aliis inteſtino jungitur*; Some have the gall adjoyned to the Guts, as the Crow, the Swallow, Sparrow and the Dove; the ſame is alſo atteſted by *Pliny*, and not without ſome paſſion by *Galen*, who in his Book *De Atra bile*, accounts him ridiculous that denies it.

It is not agreeable to the conſtitution of this Animal, nor can we ſo reaſonably conceive there wants a Gall: that is, The hot and fiery humour in a Body ſo hot of temper, which Flegm or Melancholy could not effect. Now of what Complexion it is, *Julius Alexandrinus* declareth, when he affirmeth, that ſome upon the uſe thereof, have fallen into Feavers and Quinſies. The temper of their Dung and inteſtinal Excretions do alſo confirm the ſame; which Topically applyed become a *Phœnigmus* or rubifying Medicine, and are of ſuch fiery Parts, that as we read in *Galen*, they have of themſelves conceived Fire, and burnt a Houſe about them. And therefore when in the Famine of *Samaria* (wherein the fourth part of a Cab of Pigeons Dung was ſold for five pieces of Silver,) it is delivered by *Joſephus*, That Men made uſe hereof in ſtead of common Salt: although the expoſition ſeem ſtrange, it is more probable than many other. For that it containeth very much Salt, as beſides the effects before expreſſed, is diſcernable by taſt, and

Salubrium 31°.

and the Earth of Columberries or Dove-Houſes, ſo much deſired in the artifice of Salt-petre. And to ſpeak generally, the Excrement of Birds hath more of Salt and Acrimony, than that of other piſſing Animals. Now if becauſe the Dove is of a mild and gentle Nature, we cannot conceive it ſhould be of an hot temper; our apprehenſions are not diſtinct in the meaſure of Conſtitutions, and the ſeveral parts which evidence ſuch conditions. For the iraſcible Paſſions do follow the temper of the Heart, but the concupiſcible diſtractions the craſis of the Liver. Now many have hot Livers, which have but cool and temperate Hearts; and this was probably the temper of *Paris*, a contrary conſtitution to that of *Ajax*, and both but ſhort of *Medea*, who ſeemed to exceed in either.

Whence the iraſcible, whence the concupiſcible paſſions do moſt ariſe.

Laſtly, it is repugnant to Experience, for anatomical Enquiry diſcovereth in them a Gall: and that according to the determination of *Ariſtotle*, not annexed unto the Liver, but adhering unto the Guts: Nor is the humour contained in ſmaller Veins or obſcurer capillations, but in a Veſicle or little Bladder, though ſome affirm it hath no Bag at all. And therefore the Hieroglyphick of the *Ægyptians*, though allowable in the Senſe, is weak in the Foundation: Who expreſſing Meekneſs and Lenity by the Portraict of a Dove with a Tail erected, affirmed it had no Gall in the inward parts, but only in the Rump, and as it were out of the Body. And therefore alſo if they conceived their Gods were pleaſed with the Sacrifice of this Animal, as being without Gall, the antient Heathens were ſurely miſtaken in the Reaſon, and in the very Oblation. Whereas in the Holocauſt or burnt-Offering of *Moſes*, the Gall was caſt away: For as *Ben Maimon* inſtructeth, The inwards whereto the Gall adhereth were taken out with the Crop, according unto the Law: Which the Prieſt did not burn, but caſt unto the Eaſt, that is, behind his back, and readieſt place to be carried out of the Sanctuary. And if they alſo conceived that for this Reaſon, they were the Birds of *Venus*, and wanting the furious and diſcording part, were more acceptable unto the Deity of Love, they ſurely added unto the conceit, which was at firſt Venereal: and in this Animal may be ſufficiently made out from that Conception.

Lev. 1.

Doves, the Birds of *Venus*, why?

The ground of this conceit is partly like the former, the obſcure ſituation of the Gall, and out of the Liver, wherein it is commonly enquired. But this is a very unjuſt illation, not well conſidering with what variety this part is ſeated in Birds. In ſome both at the Stomach and the Liver, as in the *Capriceps*; in ſome at the Liver only, as in Cocks, Turkeys and Pheaſants; in others at the Guts and Liver, as in Hawks and Kites; in ſome at the guts alone, as Crows, Doves, and many more. And theſe perhaps may take up all the ways of ſituation, not only in Birds, but alſo other Animals; for what is ſaid of the Anchovy, That anſwerable unto its name, it carrieth the Gall in the Head, is farther to be enquired. And though the diſcoloured Particles in the Skin of an Heron, be commonly termed Gall, yet is not this Animal deficient in that part, but containeth it in the Liver. And thus when it is conceived that the Eyes of *Tobias* were cured by the Gall of the Fiſh *Callionymus* or *Scorpius Marinus*, commended to that effect by *Dioſcorides*, although that part were not in the Liver, yet there were no reaſon to doubt that probability. And whatſoever Animal it was, it may be received without exception, when it's delivered, The married couple as a teſtimony of future concord, did caſt the Gall of the Sacrifice behind the Altar.

Ἐνχρασίχολος.

A ſtrict and literal acception of a looſe and tropical expreſſion was a ſecond ground hereof. For while ſome affirmed it had no Gall, intending only thereby no evidence of anger or fury; others have conſtrued it anatomically, and denyed that part at all. By which illation we may infer, and that from ſacred Text, a Pigeon hath no Heart; according to that Expreſſion, *Factus eſt Ephraim ſicut Columba ſeducta non habens Cor.* And ſo from the Letter of Scripture we may conclude it is no mild, but a fiery and furious Animal, according to that of *Jeremy*, *Facta eſt terra in deſolationem à facie iræ Columbæ:* and again, *Revertamur ad terram nativitatis noſtræ à facie gladii Columbæ.* Where notwithſtanding

Hoſea 7.

Cap. 25.

Cap. 40.

ing the Dove is not literally intended; but thereby may be implied the *Babylonians*, whose Queen *Semiramis* was called by that name, and whose successors did bear the Dove in their Standard. So is it proverbially said, *Formicæ sua bilis inest, habet & musca splenem*; whereas we know Philosophy doubteth these parts, nor hath *Anatomy* so clearly discovered them in those Insects.

If therefore any affirm a Pigeon hath no gall, implying no more thereby than the lenity of this Animal, we shall not controvert his affirmation. Thus may we make out the assertions of ancient Writers, and safely receive the expressions of Divines and worthy Fathers. But if by a transition from Rhetorick to Logick, he shall contend, it hath no such part or humour, he committeth an open fallacy, and such as was probably first committed concerning *Spanish* Mares, whose swiftness tropically expressed from their generation by the wind, might after be grosly taken, and a real Truth conceived in that conception.

CHAP. IV.

Of the Bever.

THat a Bever to escape the Hunter, bites off his testicles or stones, is a Tenet very ancient; and hath had thereby advantage of propagation. For the same we find in the Hieroglyphicks of the Egyptians, in the Apologue of *Æsop*, an Author of great Antiquity, who lived in the beginning of the *Persian* Monarchy, and in the time of *Cyrus*: the same is touched by *Aristotle* in his Ethicks, but seriously delivered by *Ælian*, *Pliny*, and *Solinus*: the same we meet with in *Juvenal*, who by an handsome and Metrical expression more welcomly engrafts it into our junior Memories:

Æsop's Apologues of what antiquity.

> ——*imitatus Castora, qui se*
> *Eunuchum ipse facit, cupiens evadere damno*
> *Testiculorum, adeò medicatum intelligit inguen.*

it hath been propagated by Emblems: and some have been so bad Grammarians as to be deceived by the Name, deriving *Castor à castrando*, whereas the proper Latine word is *Fiber*, and *Castor* but borrowed from the Greek, so called *quasi* γάστωρ, that is, *Animal ventricosum*, from his swaggy and prominent belly.

Herein therefore to speak compendiously, we first presume to affirm that, from a strict enquiry, we cannot maintain the evulsion or biting off any parts; and this is declarable from the best and most professed Writers: for though some have made use hereof in a Moral or tropical way, yet have the professed Discoursers by silence deserted, or by experience rejected this assertion. Thus was it in ancient times discovered, and experimentally refuted by one *Sestius* a Physician, as it stands related by *Pliny*; by *Dioscorides*, who plainly affirms that this tradition is false: by the discoveries of Modern Authors, who have expresly discoursed hereon, as *Androvandus*, *Matthiolus*, *Gesnerus*, *Bellonius*; by *Olaus Magnus*, *Peter Martyr*, and others, who have described the manner of their Venations in *America*; they generally omitting this way of their escape, and have delivered several other, by which they are daily taken.

The original of the conceit was probably Hieroglyphical, which after became Mythological unto the Greeks, and so set down by *Æsop*; and by process of tradition, stole into a total verity, which was but partially true, that

is, in its covert ſenſe and Morality. Now why they placed this invention upon the Bever (beſide the Medicable and Merchantable commodity of *Caſtoreum*, or parts conceived to be bitten away) might be the ſagacity and wiſdom of that Animal, which from the works it performs and eſpecially its Artifice in building, is very ſtrange, and ſurely not to be matched by any other. Omitted by *Plutarch*, *De ſolertia Animalium*, but might have much advantaged the drift of that Diſcourſe.

If therefore any affirm a wiſe man ſhould demean himſelf like the Bever, who to eſcape with his life, contemneth the loſs of his genitals, that is in caſe of extremity, not ſtrictly to endeavour the preſervation of all, but to ſit down in the enjoyment of the greater good, though with the detriment and hazard of the leſſer; we may hereby apprehend a real and uſeful Truth. In this latitude of belief, we are content to receive the fable of *Hippomanes*, who redeemed his life with the loſs of a Golden Ball; and whether true or falſe, we reject not the Tragedy of *Abſyrtus*, and the diſperſion of his Members by *Medea*, to perplex the purſuit of her Father. But if any ſhall poſitively affirm this act, and cannot believe the Moral, unleſs he alſo credit the Fable; he is ſurely greedy of deluſion, and will hardly avoid deception in theories of this nature. The Error therefore and Alogy in this opinion, is worſe than in the laſt; that is, not to receive Figures for Realities, but expect a verity in Apologues; and believe, as ſerious affirmations, confeſſed and ſtudied Fables.

Again, If this were true, and that the Bever in chace makes ſome divulſion of parts, as that which we call *Caſtoreum*; yet are not the ſame to be termed Teſticles or Stones; for theſe Cods or Follicles are found in both Sexes, though ſomewhat more protuberant in the Male. There is hereto no derivation of the ſeminal parts, nor any paſſage from hence, unto the Veſſels of Ejaculation: ſome perforations only in the part it ſelf, through which the humour included doth exudate: as may be obſerved in ſuch as are freſh, and not much dried with age. And laſtly, The Teſticles properly ſo called, are of a leſſer magnitude, and ſeated inwardly upon the loins: and therefore it were not only a fruitleſs attempt, but impoſſible act, to Emnuchate or caſtrate themſelves: and might be an hazardous practice of Art, if at all attempted by others.

Now all this is confirmed from the experimental Teſtimony of five very memorable Authors; *Bellonius*, *Geſnerus*, *Amatus*, *Rondeletius* and *Matthiolus*: who receiving the hint hereof from *Rondeletius* in the Anatomy of two Bevers, did find all true that had been delivered by him, whoſe words are theſe in his learned Book *De Piſcibus*: *Fibri in inguinibus geminos tumores habent, utrinque unicum; ovi Anſerini magnitudine, inter hos eſt mentula in maribus, in fœminis pudendum; hi tumores teſtes non ſunt, ſed folliculi membranâ contecti, in quorum medio ſinguli ſunt meatus, è quibus exudat liquor pinguis & ceroſus quem ipſe Caſtor ſæpe admoto ore lambit & exugit, poſtea veluti oleo, corporis partes oblinit; Hos tumores teſtes non eſſe hinc maximè colligitur, quòd ab illis nulla eſt ad mentulam via neque ductus quò humor in mentulæ meatum derivetur, & foras emittatur; præterea quòd teſtes intus reperiuntur, eoſdem tumores Moſcho animali ineſſe puto, è quibus odoratum illud pus emanat.* Than which words there can be no plainer, nor more evidently diſcovering the impropriety of this appellation. That which is included in the cod or viſible bag about the groin, being not the Teſticle, or any ſpermatical part; but rather a collection of ſome ſuperfluous matter deflowing from the body, eſpecially the parts of nutrition as unto their proper emunctories; and as it doth in Musk and Civet Cats, though in a different and offenſive odour; proceeding partly from its food, that being eſpecially Fiſh; whereof this humour may be a garous excretion and olidous ſeparation.

Moſt therefore of the Moderns before *Rondeletius*, and all the Ancients excepting *Soſtius*, have miſunderſtood this part, conceiving *Caſtorium* the Teſticles of the *Bever*; as *Dioſcorides*, *Galen*, *Ægineta*, *Ætius*, and others have pleaſed to name it. The Egyptians alſo failed in the ground

of

of their Hieroglyphick, when they expreſſed the puniſhment of Adultery by the Bever depriving himſelf of his teſticles, which was amongſt them the penalty of ſuch incontinency. Nor is *Ætius*, perhaps, too ſtrictly to be obſerved, when he preſcribeth the ſtones of the Otter, or River-dog, as ſuccedaneous unto *Caſtoreum*. But moſt inexcuſable of all is *Pliny*; who having before him in one place the experiment of *Seſtius* againſt it, ſets down in another, that the *Bevers* of *Pontus* bite off their teſticles; and in the ſame place affirmeth the like of the *Hyæna*. Which was indeed well joined with the Bever, as having alſo a bag in thoſe parts; if thereby we underſtand the *Hyæna odorata*, or Civet Cat, as is delivered and graphically deſcribed by *Caſtellus*. *Caſtellus de Hyæna odoriſera.*

Now the ground of this miſtake might be the reſemblance and ſituation of theſe tumours about thoſe parts, wherein we obſerve the teſticles in other animals. Which notwithſtanding is no well founded illation; for the teſticles are defined by their office, and not determined by place or ſituation; they having one office in all, but different ſeats in many. For beſide that, no Serpent, or Fiſhes oviparous, have any Stones at all; that neither biped nor quadruped oviparous have any exteriourly, or prominent in the groin; ſome alſo that are viviparous contain theſe parts within, as beſide this animal, the Elephant and the Hedge-hog.

If any therefore ſhall term theſe teſticles, intending metaphorically, and in no ſtrict acception; his language is tolerable, and offends our ears no more than the Tropical names of Plants: when we read in Herbals, of Dogs, Fox, and Goat-ſtones. But if he inſiſteth thereon, and maintaineth a propriety in this language; our diſcourſe hath overthrown his aſſertion, nor will Logick permit his illation; that is, from things alike, to conclude a thing the ſame; and from an accidental convenience, that is, a ſimilitude in place or figure, to infer a ſpecifical congruity or ſubſtantial concurrence in Nature.

CHAP. V.

Of the Badger.

THat a Brock or Badger hath the legs on one ſide ſhorter than of the other, though an opinion perhaps not very ancient, is yet very general; received not only by Theoriſts and unexperienced believers, but aſſented unto by moſt who have the opportunity to behold and hunt them daily. Which notwithſtanding upon enquiry I find repugnant unto the three Determinators of Truth, Authority, Senſe, and Reaſon. For firſt, *Albertus Magnus* ſpeaks dubiouſly, confeſſing he could not confirm the verity hereof; but *Aldrovandus* plainly affirmeth, there can be no ſuch inequality obſerved. And for my own part, upon indifferent enquiry, I cannot diſcover this difference, although the regardable ſide be defined, and the brevity by moſt imputed unto the left.

Again, it ſeems no eaſie affront unto Reaſon, and generally repugnant unto the courſe of Nature; for if we ſurvey the total ſet of Animals, we may in their legs, or Organs of progreſſion, obſerve an equality of length, and parity of Numeration; that is, not any to have an odd legg, or the ſupporters and movers of one ſide not exactly anſwered by the other. Although the hinder may be unequal unto the fore and middle legs, as in Frogs, Locuſts, and Graſhoppers; or both unto the middle, as in ſome Beetles and Spiders, as is determined by *Ariſtotle*, *De inceſſu Animalium*. Perfect and viviparous quadrupeds, ſo ſtanding in their poſition of pronenes, that the oppoſite joints of neighbour legs conſiſt in the ſame plane; and a *De inceſſu Animalium.*

line descending from their Navel intersects at right angles the axis of the Earth. It happeneth often I confess that a Lobster hath the Chely or great claw of one side longer than the other; but this is not properly their leg, but a part of apprehension, and whereby they hold or seize upon their prey; for the legs and proper parts of progression are inverted backward, and stand in a position opposite unto these.

Diagonion, a line drawn from the cross angles.

Lastly, The Monstrosity is ill contrived, and with some disadvantage; the shortness being affixed unto the legs of one side, which might have been more tolerably placed upon the thwart or Diagonal Movers. For the progression of quadrupeds being performed *per Diametrum*, that is, the cross legs moving or resting together, so that two are always in motion, and two in station at the same time; the brevity had been more tolerable in the cross legs. For then the Motion and station had been performed by equal legs; whereas herein they are both performed by unequal Organs, and the imperfection becomes discoverable at every hand.

CHAP. VI.

Of the Bear.

THat a Bear brings forth her young informous and unshapen, which she fashioneth after by licking them over, is an opinion not only vulgar, and common with us at present: but hath been of old delivered by ancient Writers. Upon this foundation it was an Hieroglyphick with the Egyptians; *Aristotle* seems to countenance it; *Solinus*, *Pliny*, and *Ælian* directly affirm it, and *Ovid* smoothly delivereth it:

Nec catulus partu quem reddidit ursa recenti
Sed malè viva caro est, lambendo mater in artus
Ducit, & informam qualem cupit ipsa reducit.

Which notwithstanding is not only repugnant unto the sense of every one that shall enquire into it, but the exact and deliberate experiment of three Authentick Philosophers. The first of *Matthiolus* in his Comment on *Dioscorides*, whose words are to this effect. In the Valley of *Anania* about *Trent*, in a Bear which the Hunters eventerated or opened, I beheld the young ones with all their parts distinct; and not without shape, as many conceive; giving more credit unto *Aristotle* and *Pliny*, than experience and their proper Senses. Of the same assurance was *Julius Scaliger* in his Exercitations, *Ursam fœtus informes potius ejicere, quam parere, si vera dicunt, quos postea linctu effingat: Quid hujusce fabulæ authoribus fidei habendum, ex hac historia cognosces; In nostris Alpibus venatores fœtam Ursam cepêre, dissectâ eâ fœtus planè formatus intùs inventus est.* And lastly, *Aldrovandus* who from the testimony of his own eyes affirmeth, that in the Cabinet of the Senate of *Bononia*, there was preserved in a Glass a Cub taken out of a Bear perfectly formed, and compleat in every part.

It is moreover injurious unto Reason, and much impugneth the course and providence of Nature, to conceive a birth should be ordained before there is a formation. For the conformation of parts is necessarily required, not only unto the pre-requisites and previous conditions of birth, as Motion and Animation: but also unto the parturition or very birth it self: Wherein not only the Dam, but the younglings play their parts; and the cause and act of exclusion proceedeth from them both. For the exclusion of Animals is not meerly passive like that of Eggs, nor the total action of delivery to be imputed unto the Mother: but the first attempt beginneth from the Infant,

Infant, which at the accompliſhed period attempteth to change his Manſion; and ſtrugling to come forth, dilacerates and breaks thoſe parts which reſtrained him before.

Beſide (what few take notice of) Men hereby do in an high meaſure vilifie the works of God, imputing that unto the tongue of a Beaſt, which is the ſtrangeſt Artifice in all the acts of Nature; that is the formation of the Infant in the Womb, not only in Mankind, but all viviparous Animals. Wherein the plaſtick or formative faculty, from matter appearing Homogeneous, and of a ſimilary ſubſtance, erecteth Bones, Membranes, Veins and Arteries; and out of theſe contriveth every part in number, place, and figure according to the law of its ſpecies. Which is ſo far from being faſhioned by any outward agent, that one omitted or perverted by a ſlip of the inward *Phidias*, it is not reducible by any other whatſoever. And therefore *Mirè me plaſmaverunt manus tuæ*, though it originally reſpected the generation of Man, yet is it appliable unto that of other Animals; who entring the Womb in bare and ſimple Materials, return with diſtinction of parts, and the perfect breath of life. He that ſhall conſider theſe alterations without, muſt needs conceive there have been ſtrange operations within; which to behold, it were a ſpectacle almoſt worth ones beeing, a ſight beyond all; except that Man had been created firſt, and might have ſeen the ſhew of five days after.

Formation in the Matrix, the admirable work of Nature.

Now as the opinion is repugnant both unto Senſe and Reaſon, ſo hath it probably been occaſioned from ſome ſlight ground in either. Thus in regard the Cub comes forth involved in the *Chorion*, a thick and tough Membrane obſcuring the formation, and which the Dam doth after bite and tear aſunder; the beholder at firſt ſight conceives it a rude and informous lump of fleſh, and imputes the enſuing ſhape unto the Mouthing of the Dam; which addeth nothing thereunto, but only draws the curtain, and takes away the vail which concealed the Piece before. And thus have ſome endeavoured to enforce the ſame from Reaſon; that is, the ſmall and ſlender time of the Bears geſtation, or going with her young; which laſting but few days (a Month ſome ſay) the excluſion becomes precipitous, and the young ones conſequently informous; according to that of *Solinus*, *Trigeſimus dies uterum liberat urſæ; unde evenit ut præcipitata fœcunditas informes creet partus.* But this will overthrow the general Method or Nature in the works of generation. For therein the conformation is not only antecedent, but proportional unto the excluſion; and if the period of the birth be ſhort, the term of conformation will be as ſudden alſo. There may I confeſs from this narrow time of geſtation enſue a Minority or ſmalneſs in the excluſion; but this however inferreth no informity, and it ſtill receiveth the Name of a natural and legitimate birth; whereas if we affirm a total informity, it cannot admit ſo forward a term as an Abortment, for that ſuppoſeth conformation. So we muſt call this conſtant and intended act of Nature, a ſlip or effluxion, that is an excluſion before conformation: before the birth can bear the name of the Parent, or be ſo much as properly called an *Embryon*.

*Expunge.

CHAP.

CHAP. VII.

Of the Basilisk.

MAny Opinions are passant concerning the Basilisk or little King of Serpents, commonly called the Cockatrice: some affirming, others denying, most doubting the relations made hereof. What therefore in these incertainties we may more safely determine: that such an Animal there is, if we evade not the testimony of Scripture and humane Writers, we cannot safely deny. So is it said *Psalm* 91. *Super Aspidem & Basiliscum ambulabis*, wherein the Vulgar Translation retaineth the Word of the Septuagint, using in other places the Latine expression *Regulus*, as *Proverbs* 23. *Mordebit ut Coluber, & sicut Regulus venena diffundet*: and *Jeremy* 8. *Ecce ego mittam vobis serpentes Regulos, &c.* That is, as ours translate it, *Behold I will send Serpents, Cockatrices among you which will not be charmed, and they shall bite you.* And as for humane Authors, or such as have discoursed of Animals, or Poisons, it is to be found almost in all: in *Dioscorides*, *Galen*, *Pliny*, *Solinus*, *Ælian*, *Ætius*, *Avicen*, *Ardoynus*, *Grevinus*, and many more. In *Aristotle* I confess we find no mention thereof; but *Scaliger* in his Comment and enumeration of Serpents, hath made supply; and in his Exercitations delivereth that a Basilisk was found in *Rome*, in the days of *Leo* the fourth. The like is reported by *Sigonius*; and some are so far from denying one, that they have made several kinds thereof: for such is the *Catoblepas* of *Pliny* conceived to be by some, and the *Dryinus* of *Ætius* by others.

But although we deny not the existence of the Basilisk, yet whether we do not commonly mistake in the conception hereof, and call that a Basilisk which is none at all, is surely to be questioned. For certainly that which from the conceit of its generation we vulgarly call a Cockatrice, and wherein (but under a different name) we intend a formal Identity and adequate conception with the Basilisk (is not the Basilisk of the Ancients, whereof such wonders are delivered. For this of ours is generally described with legs, wings, a Serpentine and winding tail, and a crest or comb somewhat like a Cock. But the Basilisk of elder times was a proper kind of Serpent, not above three palms long, as some account; and differenced from other Serpents by advancing his head, and some white marks or coronary spots upon the crown, as all authentick Writers have delivered.

Nor is this Cockatrice only unlike the Basilisk, but of no real shape in Nature; and rather an Hieroglyphical fancy, to express different intentions, set forth in different fashions. Sometimes with the head of a Man, sometime with the head of an Hawk, as *Pierius* hath delivered; and as with addition of legs the Heralds and Painters still describe it. Nor was it only of old a symbolical and allowable invention, but is now become a manual contrivance of Art, and artificial imposture; whereof besides others, *Scaliger* hath taken notice: *Basiliſci formam mentiti sunt vulgò Gallinaceo similem, & pedibus binis; neque enim absimiles sunt cæteris serpentibus, nisi macula quasi in vertice candida, unde illi nomen Regium*; that is, Men commonly counterfeit the form of a Basilisk with another like a Cock, and with two feet; whereas they differ not from other Serpents, but in a white speck upon their Crown. Now although in some manner it might be counterfeited in *Indian* Cocks, and flying Serpents, yet is it commonly contrived out of the skins of Thornbacks, Scaits, or Maids, as *Aldrovand* hath observed, and also † graphically described in his excellent Book of Fishes, and for satisfaction of my own curiosity I have caused some to be thus contrived out of the same Fishes.

† By way of figure.

Nor is only the existency of this animal considerable, but many things delivered thereof, particularly its poison and its generation. Concern-

ing

ing the first, according to the doctrine of the Ancients, men still affirm, that it killeth at a distance, that it poisoneth by the eye, and by priority of vision. Now that † deleterious it may be at some distance, and destructive without corporal contaction, what uncertainty soever there be in the effect; there is no high improbability in the relation. For if Plagues or pestilential Atoms have been conveyed in the Air from different Regions, if men at a distance have infected each other, if the shadows of some trees be noxious, if *Torpedo*'s deliver their *opium* at a distance, and stupefie beyond themselves; we cannot reasonably deny, that (beside our gross and restrained poisons requiring contiguity unto their actions) there may proceed from subtiler seeds, more agile emanations, which contemn those Laws, and invade at distance unexpected.

* Destructive:

That this venenation shooteth from the eye, and that this way a Basilisk may empoison, although thus much be not agreed upon by Authors; some imputing it unto the breath, others unto the bite, it is not a thing impossible. For eyes receive offensive impressions from their objects, and may have influences destructive to each other. For the visible species of things strike not our senses immaterially, but streaming in corporal raies, do carry with them the qualities of the object from whence they flow, and the *medium* through which they pass. Thus through a green or red Glass all things we behold appear of the same colours; thus sore eyes affect those which are sound, and themselves also by reflection, as will happen to an inflamed eye that beholds it self long in a Glass; thus is fascination made out, and thus also it is not impossible, what is affirmed of this animal; the visible rayes of their eyes carrying forth the subtilest portion of their poison, which received by the eye of man or beast, infecteth first the brain, and is from thence communicated unto the heart.

Effluxion of corporeal species.

How the Basilisk kills at distance.

But lastly, That this destruction should be the effect of the first beholder, or depend upon priority of aspection, is a point not easily to be granted, and very hardly to be made out upon the principles of *Aristotle*, *Alhazen*, *Vitello*, and others, who hold, that sight is made by Reception, and not by extramission; by receiving the raies of the object into the eye, and not by sending any out. For hereby although he behold a man first, the Basilisk should rather be destroyed, in regard he first receiveth the rayes of his Antipathy, and venomous emissions which objectively move his sense; but how powerful soever his own poison be, it invadeth not the sense of man, in regard he beholdeth him not. And therefore this conceit was probably begot by such as held the opinion of sight by extramission; as did *Pythagoras*, *Plato*, *Empedocles*, *Hipparchus*, *Galen*, *Macrobius*, *Proclus*, *Simplicius*, with most of the Ancients, and is the postulate of *Euclide* in his Opticks, but now sufficiently convicted from observations of the Dark Chamber.

As for the generation of the Basilisk, that it proceedeth from a Cocks egg hatched under a Toad or Serpent, it is a conceit as monstrous as the brood it self. For if we should grant that Cocks growing old, and unable for emission, amass within themselves some seminal matter, which may after conglobate into the form of an egg, yet will this substance be unfruitful. As wanting one principle of generation, and a commixture of the seed of both sexes, which is required unto production, as may be observed in the eggs of Hens not trodden; and as we have made trial in some which are termed Cocks eggs. It is not indeed impossible that from the sperm of a Cock, Hen, or other Animal, being once in putrescence, either from incubation or otherwise, some generation may ensue; not univocal and of the same species, but some imperfect or monstrous production, even as in the body of man from putrid humours, and peculiar ways of corruption there have succeeded strange and unseconded shapes of worms; whereof we have beheld some our selves, and read of others in medical observations. And so may strange and venomous Serpents be several ways engendered; but that this generation should be regular, and alway produce a Basilisk, is beyond our affirmation, and we have good reason to doubt.

The generation of the Cocks egg.

Ovum Centenium, or the last egg, which is a very little one.

Again,

Again, It is unreasonable to ascribe the equivocancy of this form unto the hatching of a Toad, or imagine, that diversifies the production. For Incubation alters not the species, nor if we observe it, so much as concurs either to the sex or colour: as appears in the eggs of Ducks or Partridges hatched under a Hen, there being required unto their exclusion only a gentle and continued heat: and that not particular or confined unto the species or parent. So have I known the seed of Silk-worms hatched on the bodies of women: and *Pliny* reports that *Livia* the wife of *Augustus* hatched an egg in her bosome. Nor is only an animal heat required hereto, but an elemental and artificial warmth will suffice: for as *Diodorus* delivereth, the Ægyptians were wont to hatch their eggs in Ovens, and many eye-witnesses confirm that practice unto this day. And therefore this generation of the Basilisk, seems like that of *Castor* and *Helena*; he that can credit the one, may easily believe the other: that is, that these two were hatched out of the egg which *Jupiter* in the form of a Swan, begat on his Mistress *Leda*.

The occasion of this conceit might be an Egyptian tradition concerning the Bird *Ibis*: which after became transferred unto Cocks. For an opinion it was of that Nation, that the *Ibis* feeding upon Serpents, that venomous food so inquinated their oval conceptions, or Eggs within their bodies, that they sometimes came forth in Serpentine shapes, and therefore they always brake their Eggs, nor would they endure the Bird to sit upon them. But how causeless their fear was herein, the daily incubation of Ducks, Pea-hens, and many other testifie; and the Stork might have informed them, which Bird they honoured and cherished, to destroy their Serpents.

That which much promoted it, was a misapprehension in holy Scripture upon the Latine translation in *Esa.* 51. *Ova aspidum ruperunt, & telas Araneārum texuerunt, qui comedet de ovis eorum morietur, & quod confotum est, erumpet in Regulum.* From whence notwithstanding, beside the generation of Serpents from Eggs, there can be nothing concluded; and what kind of Serpents are meant, not easie to be determined; for Translations are very different: *Tremellius* rendering the Asp *Hæmorrhous*, and the Regulus or Basilisk a Viper, and our Translation for the Asp sets down a Cockatrice in the Text, and an Adder in the margin.

Another place of *Esay* doth also seem to countenance it, Chap. 14. *Ne lateris Philistæa, quoniam diminuta est virga percussoris tui; de radice enim colubri egredietur Regulus, & semen ejus absorbens volucrem*; which ours somewhat favourably rendereth; *Out of the Serpents Root shall come forth a Cockatrice, and his fruit shall be a fiery flying Serpent.* But *Tremellius, è radice Serpentis prodit Hemorrhois, & fructus illius præster volans*; wherein the words are different, but the sense is still the same; for therein are figuratively intended *Uzziah* and *Ezethias*; for though the Philistines had escaped the minor Serpent *Uzziah*, yet from his stock a fiercer Snake should arise, that would more terribly sting them, and that was *Ezechias*.

But the greatest promotion it hath received from a misunderstanding of the Hieroglyphical intention. For being conceived to be the Lord and King of Serpents, to aw all others, nor to be destroyed by any; the Ægyptians hereby implied Eternity, and the awful power of the supreme Deity: and therefore described a crowned Asp or Basilisk upon the heads of their gods. As may be observed in the Bembine Table, and other Ægyptian Monuments.

CHAP.

CHAP. VIII.

Of the Wolf.

SUCH a Story as the Basilisk is that of the Wolf concerning priority of vision, that a man becomes hoarse or dumb, if a Wolf have the advantage first to eye him. And this is in plain language affirmed by *Pliny*: *In Italia, ut creditur, Luporum visus est noxius, vocémque homini, quem priùs contemplatur, adimere*; so is it made out what is delivered by *Theocritus*, and after him by *Virgil*:

——Vox quoque Mœrim
Jam fugit ipsa, Lupi Mœrim videre priores.

Thus is the Proverb to be understood, when during the discourse, if the party or subject interveneth, and there ensueth a sudden silence, it is usually said, *Lupus est in fabula.* Which conceit being already convicted, not only by *Scaliger*, *Riolanus*, and others; but daily confutable almost every where out of *England*, we shall not further refute.

The ground or occasional original hereof, was probably the amazement and sudden silence the unexpected appearance of Wolves do often put upon Travellers; not by a supposed vapour, or venomous emanation, but a vehement fear which naturally produceth obmutescence; and sometimes irrecoverable silence. Thus Birds are silent in presence of an Hawk, and *Pliny* saith that Dogs are mute in the shadow of an Hyæna. But thus could not the mouths of worthy Martyrs be silenced, who being exposed not only unto the eyes, but the merciless teeth of Wolves, gave loud expressions of their faith, and their holy clamours were heard as high as Heaven.

That which much promoted it, beside the common Proverb, was an expression in *Theocritus*, a very ancient Poet, ἐ φθέγξη, λύκον εἶδες, *Edere non poteris vocem, Lycus est tibi visus*; which *Lycus* was Rival unto another, and suddenly appearing stopped the mouth of his Corrival: now *Lycus* signifying also a Wolf, occasioned this apprehension; men taking that appellatively, which was to be understood properly, and translating the genuine acception. Which is a fallacy of Æquivocation, and in some opinions begat the like conceit concerning *Romulus* and *Remus*, that they were fostered by a Wolf; the name of the Nurse being *Lupa*: and founded the Fable of *Europa*, and her carriage over Sea by a Bull, because the Ship or Pilot's name was *Taurus*. And thus have some been startled at the Proverb, *Bos in lingua*, confusedly apprehending how a man should be said to have an Oxe in his tongue, that would not speak his mind; which was no more than that a piece of money had silenced him: for by the Oxe was only implied a piece of coin stamped with that figure, first currant with the *Athenians*, and after among the *Romans*.

CHAP. IX.

Of the Deer.

THE common Opinion concerning the long life of Animals, is very ancient, especially of Crows, Choughs and Deer; in moderate accounts exceeding the age of man, in some the days of *Nestor*, and in others surmounting the years of *Artephius* or *Methuselah*. From whence Antiquity hath raised proverbial expressions, and the real conception of their duration, hath been the Hyperbolical expression of many others. From all the rest we shall single out the Deer, upon concession a long-lived Animal, and in longævity by many conceived to attain unto hundreds; wherein permitting every man his own belief, we shall our selves crave liberty to doubt, and our reasons are these ensuing.

The first is that of *Aristotle*, drawn from the increment and gestation of this Animal, that is, its sudden arrivance unto growth and maturity, and the small time of its remainder in the Womb. His words in the translation of *Scaliger* are these, *De ejus vitæ longitudine fabulantur; neque enim aut gestatio aut incrementum binnulorum ejusmodi sunt, ut præstent argumentum longævi animalis*; that is, Fables are raised concerning the vivacity of Deer; for neither are their gestation or increment, such as may afford an argument of long life. And these, saith *Scaliger*, are good Mediums conjunctively taken, that is, not one without the other. For of Animals viviparous such as live long, go long with young, and attain but slowly to their maturity and stature. So the Horse that liveth about thirty, arriveth unto his stature about six years, and remaineth above ten months in the womb; so the Camel that liveth unto fifty, goeth with young no less than ten months, and ceaseth not to grow before seven; and so the Elephant that liveth an hundred, beareth its young above a year, and arriveth unto perfection at twenty. On the contrary, the Sheep and Goat, which live but eight or ten years, go but five months, and attain to their perfection at two years: and the like proportion is observable in Cats, Hares, and Conies. And so the Deer that endureth the womb but eight months, and is is compleat at six years, from the course of Nature, we cannot expect to live an hundred; nor in any proportional allowance much more than thirty. As having already passed two general motions observable in all animations, that is, its beginning and encrease; and having but two more to run thorow, that is, its state and declination; which are proportionally set out by Nature in every kind: and naturally proceeding admit of inference from each other.

The other ground that brings its long life into question, is the immoderate felicity, and almost unparallel'd excess of venery, which every *September* may be observed in this Animal: and is supposed to shorten the lives of Cocks, Partridges, and Sparrows. Certainly a confessed and undeniable enemy unto longævity, and that not only as a sign in the complexional desire and impetuosity, but also as a cause in the frequent act, or iterated performance thereof. For though we consent not with that Philosopher, who thinks a spermatical emission unto the weight of one drachm, is æquivalent unto the effusion of sixty ounces of bloud; yet considering the exolution and languor ensuing that act in some, the extenuation and marcour in others, and the visible acceleration it maketh of age in most: we cannot but think it much abridgeth our days. Although we also concede that this exclusion is natural, that Nature it self will find a way hereto without either act or object: And although it be placed among the six Non-naturals, that is, such as neither naturally constitutive, nor meerly destructive, do preserve or destroy according unto circumstance: yet do we sensibly observe an impotency, or total privation thereof, prolongeth life: and they live

longest

longeſt in every kind that exerciſe it not at all. And this is true not only in Eunuchs by Nature, but Spadoes by Art: for caſtrated Animals in every ſpecies are longer lived than they which retain their virilities. For the generation of bodies is not meerly effected, as ſome conceive of Souls, that is, by Irradiation, or anſwerably unto the propagation of light, without its proper diminution: but therein a tranſmiſſion is made materially from ſome parts, with the Idea of every one: and the propagation of one, is in a ſtrict acception, ſome minoration of another. And therefore alſo that Axiom in Philoſophy, that the generation of one thing, is the corruption of another: although it be ſubſtantially true concerning the form and matter, is alſo diſpoſitively verified in the efficient or producer.

Eunuchs and gelded creatures generally longer lived.

As for more ſenſible Arguments, and ſuch as relate unto experiment: from theſe we have alſo reaſon to doubt its age, and preſumed vivacity: for where long life is natural, the marks of age are late: and when they appear, the journey unto death cannot be long. Now the age of Deer (as *Ariſtotle* long ago obſerved) is beſt conjectured, by view of the horns and teeth. From the horns there is a particular and annual account unto ſix years: they ariſing firſt plain, and ſo ſucceſſively branching: after which the judgment of their years by particular marks becomes uncertain. But when they grow old, they grow leſs branched, and firſt do loſe their ἀμυντῆρες; or *propugnacula*; that is, their brow-antlers, or loweſt furcations next the head, which *Ariſtotle* ſaith, the young ones uſe in fight: and the old as needleſs, have them not at all. The ſame may be alſo collected from the loſs of their Teeth, whereof in old age they have few or none before in either jaw. Now theſe are infallible marks of age, and when they appear, we muſt confeſs a declination: which notwithſtanding (as men inform us in *England*, where obſervations may well be made,) will happen between twenty and thirty. As for the bone, or rather induration of the Roots of the arterial vein and great Artery, which is thought to be found only in the heart of an old Deer, and therefore becomes more precious in its Rarity; it is often found in Deer much under thirty, and we have known ſome affirm they have found it in one of half that age. And therefore in that account of *Pliny*, of a Deer with a Collar about his neck, put on by *Alexander* the Great, and taken alive an hundred years after, with other relations of this nature, we much ſuſpect impoſture or miſtake. And if we grant their verity, they are but ſingle relations, and very rare contingencies in individuals, not affording a regular deduction upon the ſpecies. For though *Ulyſſes* his Dog lived unto twenty, and the *Athenian* Mule unto fourſcore, yet do we not meaſure their days by thoſe years, or uſually ſay, they live thus long. Nor can the three hundred years of *Jonn* of times, or *Neſtor*, overthrow the aſſertion of *Moſes*, or afford a reaſonable encouragement beyond his ſeptuagenary determination. *Pſalm.* 90.

The ground and authority of this conceit was firſt Hieroglyphical, the *Ægyptians* expreſſing longævity by this Animal; but upon what uncertainties, and alſo convincible falſities they often erected ſuch Emblems, we have elſewhere delivered. And if that were true which *Ariſtotle* delivers of his time, and *Pliny* was not afraid to take up long after, the *Ægyptians* could make but weak obſervations herein: for though it be ſaid that *Æneas* feaſted his followers with Veniſon, yet *Ariſtotle* affirms that neither Deer nor Boar were to be found in *Africa*. And how far they miſcounted the lives and duration of Animals, is evident from their conceit of the Crow, which they preſume to live five hundred years; and from the lives of Hawks, which (as *Ælian* delivereth) the *Ægyptians* do reckon no leſs than at ſeven hundred. *Hiſtor. animal. lib.* 3.

The ſecond which led the conceit unto the *Grecians*, and probably deſcended from the *Ægyptians*, was Poetical; and that was a paſſage of *Heſiod*, thus rendred by *Auſonius*.

Ter binos deciſque novem ſuper exit in annos,
Juſta ſeneſcentûm quos implet vita virorum.
Hos novies ſuperat vivendo garrula cornix,

Et quater egreditur cornicis ſæcula cervus,
Alipidem cervum ter vincit corvus.——

To ninety ſix the life of man aſcendeth,
Nine times as long that of the Chough extendeth,
Four times beyond the life of Deer doth go,
And thrice is that ſurpaſſed by the Crow.

So that according to this account, allowing ninety ſix for the age of Man, the life of a Deer amounts unto three thouſand four hundred fifty ſix. A conceit ſo hard to be made out, that many have deſerted the common and literal conſtruction. So *Theon* in *Aratus* would have the number of nine not taken ſtrictly, but for many years. In other opinions the compute ſo far exceedeth the truth, that they have thought it more probable to take the word *Genea*, that is, a generation conſiſting of many years, but for one year, or a ſingle revolution of the Sun; which is the remarkable meaſure of time, and within the compaſs whereof we receive our perfection in the womb. So that by this conſtruction, the years of a Deer ſhould be but thirty ſix, as is diſcourſed at large in that Tract of *Plutarch*, concerning the ceſſation of Oracles; and whereto in his diſcourſe of the Crow, *Aldrovandus* alſo inclineth. Others not able to make it out, have rejected the whole account, as may be obſerved from the words of *Pliny*, *Heſiodus qui primus aliquid de longævitate vitæ prodidit, fabulose (reor) multa de hominum ævo referens, cornici novem noſtras attribuit ætates, quadruplum ejus cervis, id triplicatum corvis, & reliqua fabuloſius de Phœnice & Nymphis.* And this how ſlender ſoever, was probably the ſtrongeſt ground Antiquity had for this longævity of Animals; that made *Theophraſtus* expoſtulate with Nature concerning the long life of Crows; that begat that Epithete of Deer in *Oppianus*, and that expreſſion of *Juvenal*,

Τετρακόρωνος.

——*Longa & cervina ſenectus.*

The third ground was Philoſophical, and founded upon a probable Reaſon in Nature, that is, the defect of a Gall, which part (in the opinion of *Ariſtotle* and *Pliny*) this Animal wanted, and was conceived a cauſe and reaſon of their long life: according (ſay they) as it happeneth unto ſome few men, who have not this part at all. But this aſſertion is firſt defective in the verity concerning the Animal alledged: for though it be true, a Deer hath no Gall in the Liver like many other Animals, yet hath it that part in the Guts, as is diſcoverable by taſte and colour: and therefore *Pliny* doth well correct himſelf, when having affirmed before, it had no Gall, he after ſaith, ſome hold it to be in the guts; and that for their bitterneſs, dogs will refuſe to eat them. The aſſertion is alſo deficient in the verity of the Induction or connumeration of other Animals conjoined herewith, as having alſo no Gall; that is, as *Pliny* accounteth, *Equi, Muli*, &c. Horſes, Mules, Aſſes, Deer, Goats, Boars, Camels, Dolphins, have no Gall. In Dolphins and Porpoces I confeſs I could find no Gall. But concerning Horſes, what truth there is herein we have declared before; as for Goats we find not them without it; what Gall the Camel hath, *Ariſtotle* declareth: that Hogs alſo have it, we can affirm; and that not in any obſcure place, but in the Liver, even as it is ſeated in man.

That therefore the Deer is no ſhort-lived Animal, we will acknowledge: that comparatively, and in ſome ſenſe long-lived, we will concede; and thus much we ſhall grant if we commonly account its days by thirty ſix or forty: for thereby it will exceed all other cornigerous Animals. But that it attaineth unto hundreds, or the years delivered by Authors, ſince we have no authentick experience for it, ſince we have reaſon and common experience againſt it, ſince the grounds are falſe and fabulous which do eſtabliſh it: we know no ground to aſſent.

Concerning

Concerning Deer, there alſo paſſeth another Opinion, That the Males thereof do yearly loſe their pizzel. For Men obſerving the decidence of their Horns, do fall upon the like conceit of this part, that it annually rotteth away, and ſucceſſively reneweth again. Now the ground hereof was ſurely the obſervation of this part in Deer after immoderate Venery, and about the end of their Rut, which ſometimes becomes ſo relaxed and pendulous, it cannot be quite retracted: and being often beſet with Flies, it is conceived to rot, and at laſt to fall from the Body. But herein experience will contradict us: For Deer which either die or are killed at that time, or any other, are always found to have that part entire. And reaſon will alſo correct us: for ſpermatical Parts, or ſuch as are framed from the ſeminal Principles of Parents, although homogeneous or ſimilary, will not admit a Regeneration; much leſs will they receive an integral reſtauration, which being organical and inſtrumental Members, conſiſt of many of thoſe. Now this part, or Animal of *Plato*, containeth not only ſanguineous and reparable Particles: but is made up of Veins, Nerves, Arteries, and in ſome Animals of Bones: whoſe reparation is beyond its own fertility, and a Fruit not to be expected from the fructifying part it ſelf. Which faculty were it communicated unto Animals, whoſe Originals are double, as well as unto Plants, whoſe Seed is within themſelves: We might abate the Art of *Taliacotius*, and the new inarching of Noſes. And therefore the Fancies of Poets have been ſo modeſt, as not to ſet down ſuch renovations, even from the Powers of their Deities: For the mutilated Shoulder of *Pelops* was pieced out with Ivory, and that the Limbs of *Hippolytus* were ſet together, not regenerated by *Æſculapius*, is the utmoſt aſſertion of Poetry.

CHAP. X.

Of the King-Fiſher.

THat a King-Fiſher hanged by the Bill, ſheweth in what quarter the Wind is by an occult and ſecret propriety, converting the Breaſt to that Point of the Horizon from whence the Wind doth blow, is a received Opinion, and very ſtrange; introducing natural Weather-Cocks, and extending magnetical Poſitions as far as Animal Natures. A conceit ſupported chiefly by preſent practice, yet not made out by Reaſon or Experience.

Unto Reaſon it ſeemeth very repugnant, that a Carcaſs or Body diſanimated, ſhould be ſo affected with every Wind, as to carry a conformable reſpect and conſtant habitude thereto. For although in ſundry Animals we deny not a kind of natural Meteorology or inmate preſention both of Wind and Weather; yet that proceeding from Senſe receiving Impreſſions from the firſt mutation of the Air, they cannot in reaſon retain that apprehenſion after death, as being affections which depend on life, and depart upon diſanimation. And therefore with more favourable reaſon may we draw the ſame effect or ſympathy upon the Hedg-Hog, whoſe preſention of Winds is ſo exact, that it ſtoppeth the North or Southern Hole of its Neſt, according to the prenotion of theſe Winds enſuing; which ſome Men obſerving, have been able to make predictions which way the Wind would turn, and been eſteemed hereby wiſe Men in point of Weather. Now this proceeding from ſenſe in the Creature alive, it were not reaſonable to hang up an Hedg-Hog dead, and to expect a conformable motion unto its living converſion. And though in ſundry Plants their Vertues do live after death, and we know that Scammony, Rhubarb and Senna will purge without any vital aſſiſtance; yet in Animals and ſenſible Creatures, many actions are mixt, and depend upon their living form, as well as that of miſtion; and though they wholly

Whence it is, that ſome Creatures preſage the Weather.

ſeem

ſeem to retain unto the Body, depart upon diſunion. Thus Glow-worms alive, project a luſtre in the dark, which fulgour notwithſtanding ceaſeth after death; and thus the Torpedo which being alive ſtupefies at a diſtance, applied after death, produceth no ſuch effect; which had they retained in places where they abound, they might have ſupplied *Opium*, and ſerved as frontals in Phrenſies.

As for Experiment, we cannot make it out by any we have attempted; for if a ſingle King-fiſher be hanged up with untwiſted Silk in an open Room, and where the Air is free, it obſerves not a conſtant reſpect unto the mouth of the Wind, but variouſly converting, doth ſeldom breaſt it right. If two be ſuſpended in the ſame Room, they will not regularly conform their Breaſts, but oft-times reſpect the oppoſite Points of Heaven. And if we conceive that for exact exploration, they ſhould be ſuſpended where the Air is quiet and unmoved, that, clear of impediments, they may more freely convert upon their natural verticity; we have alſo made this way of inquiſition, ſuſpending them in large and capacious Glaſſes cloſely ſtopped; wherein nevertheleſs we obſerved a caſual ſtation, and that they reſted irregularly upon converſion. Whereſoever they reſted, remaining inconverted, and poſſeſſing one Point of the Compaſs, whilſt the Wind perhaps had paſſed the two and thirty.

Commonly miſtaken for the true Halcyon, ours being rather the Iſpida.

The ground of this popular Practice might be the common Opinion concerning the vertue prognoſtick of theſe Birds; as alſo the natural regard they have unto the Winds, and they unto them again; more eſpecially remarkable in the time of their nidulation and bringing forth their Young. For at that time, which happeneth about the brumal Solſtice, it hath been obſerved even unto a Proverb, that the Sea is calm, and the Winds do ceaſe, till the young ones are excluded; and forſake their Neſt, which floateth upon the Sea, and by the roughneſs of Winds might otherwiſe be overwhelmed. But how far hereby to magnifie their prediction we have no certain rule; for whether out of any particular prenotion they chuſe to ſit at this time, or whether it be thus contrived by concurrence of cauſes and providence of Nature, ſecuring every ſpecies in their production, is not yet determined. Surely many things fall out by the deſign of the general Motor, and undreamt of contrivance of Nature, which are not imputable unto the intention or knowledge of the particular Actor. So though the ſeminality of Ivy be almoſt in every Earth, yet that it ariſeth and groweth not, but where it may be ſupported; we cannot aſcribe the ſame unto the diſtinction of the Seed, or conceive any ſcience therein which ſuſpends and conditionates its eruption. So if, as *Pliny* and *Plutarch* report, the Crocodiles of *Ægypt* ſo aptly lay their Eggs, that the Natives thereby are able to know how high the Flood will attain; it will be hard to make out, how they ſhould divine the extent of the Inundation depending on cauſes ſo many miles remote; that is, the meaſure of Showres in *Æthiopia*; and whereof, as *Athanaſius* in the life of *Anthony* delivers, the Devil himſelf upon demand could make no clear Prediction. So are there likewiſe many things in Nature, which are the fore-runners or ſigns of future effects, whereto they neither concur in cauſality or prenotion, but are ſecretly ordered by the providence of Cauſes, and concurrence of Actions collateral to their ſignations.

It was alſo a cuſtome of old to keep theſe Birds in Cheſts, upon Opinion that they prevented Moths. Whether it were not firſt hanged up in Rooms to ſuch effects, is not beyond all doubt. Or whether we miſtake not the Poſture of ſuſpenſion, hanging it by the Bill, whereas we ſhould do it by the Back; that by the Bill it might point out the quarters of the Wind; for ſo hath *Kircherus* deſcribed the Orbis and the Sea-Swallow. But the eldeſt cuſtome of hanging up theſe Birds was founded upon a tradition, that they would renew their Feathers every year as though they were alive: In expectation whereof four hundred years ago *Albertus Magnus* was deceived.

CHAP.

CHAP. XI.

Of Griffins.

THat there are Griffins in Nature, that is, a mixt and dubious Animal, in the fore-part reſembling an Eagle, and behind the ſhape of a Lion, with erected Ears, four Feet and a long Tail, many affirm, and moſt, I perceive, deny not. The ſame is averred by *Ælian*, *Solinus*, *Mela* and *Herodotus*; countenanced by the Name ſometimes found in Scripture, and was an Hieroglyphick of the Egyptians.

Notwithſtanding we find moſt diligent Enquirers to be of a contrary aſſertion. For beſide that *Albertus* and *Pliny* have diſallowed it, the learned *Aldrovandus* hath in a large Diſcourſe rejected it; *Matthias Michovius* who writ of thoſe Northern parts wherein Men place theſe Griffins, hath poſitively concluded againſt it; and if examined by the Doctrine of Animals, the invention is monſtrous, nor much inferior unto the figment of Sphynx, Chimæra and Harpies; for though there be ſome flying Animals of mixed and participating Natures, that is, between Bird and Quadruped, yet are their Wings and Legs ſo ſet together, that they ſeem to make each other; there being a commixtion of both, rather than an adaptation or cement of prominent parts unto each other, as is obſervable in the Bat, whoſe Wings and Fore-legs are contrived in each other. For though ſome ſpecies there be of middle and participating Natures, that is, of Bird and Beaſt, as Bats and ſome few others; yet are their Parts ſo conformed and ſet together, that we cannot define the beginning or end of either; there being a commixtion of both in the whole, rather than an adaption or cement of the one unto the other.

Now for the Word γρὺψ or *Gryps*, ſometimes mentioned in Scripture, and frequently in Humane Authors, properly underſtood, it ſignifies ſome kind of Eagle or Vultur, from whence the Epithete *Grypus* for an hooked or Aquiline Noſe. Thus when the Septuagint makes uſe of this Word, *Tremelius* and our Tranſlation hath rendred it the Oſſifrage, which is one kind of Eagle. And although the Vulgar Tranſlation, and that annexed unto the Septuagint, retain the Word *Gryps*, which in ordinary and School Conſtruction is commonly rendred a Griffin; yet cannot the Latine aſſume any other ſenſe than the Greek, from whence it is borrowed. And though the Latine *Gryphes* be altered ſomewhat by the addition of an *h*, or aſpiration of the Letter π, yet is not this unuſual; ſo what the Greeks call τρίπαιον, the Latine will call *Tropheum*; and that perſon which in the Goſpel is named Κλεόπας, the Latines will render *Cleophas*. And therefore the quarrel of *Origen* was unjuſt, and his conception erroneous, when he conceived the Food of Griffins forbidden by the Law of *Moſes*: that is, poetical Animals, and things of no exiſtence. And therefore when in the Hecatombs and mighty Oblations of the Gentiles, it is delivered they ſacrificed *Gryphes* or Griffins; hereby we may underſtand ſome ſtronger ſort of Eagles. And therefore alſo when it is ſaid in *Virgil* of an improper Match, or *Mopſus* marrying *Nyſa*, *ſungentur jam Gryphes Equis*; we need not hunt after other ſenſe, than that ſtrange unions ſhall be made, and different Natures be conjoyned together. Lev. 11.

As for the Teſtimonies of antient Writers, they are but derivative, and terminate all in one. *Ariſteus* a Poet of *Proconeſus*; who affirmed that near the *Arimaſpi*, or one-eyed Nation, Griffins defended the Mines of Gold. But this, as *Herodotus* delivereth, he wrote by hear ſay; and *Michovius* who hath expreſly written of thoſe parts, plainly affirmeth, there is neither Gold nor Griffins in that Country, nor any ſuch Animal extant; for ſo doth he conclude, *Ego vero contra veteres Authores, Gryphes nec in illa ſeptentrionis, nec in aliis orbis partibus invoniri affirmârim.*

Laſtly,

Laſtly, concerning the Hieroglyphical Authority, although it neareſt approach the Truth, it doth not infer its exiſtency. The conceit of the *Griffin* properly taken being but a ſymbolical Phancy, in ſo intolerable a ſhape including allowable morality. So doth it well make out the properties of a *Guardian*, or any perſon entruſted; the Ears implying Attention, the Wings celerity of Execution; the Lion-like Shape, Courage and Audacity; the hooked Bill, Reſervance and Tenacity. It is alſo an Emblem of Valour and Magnanimity, as being compounded of the Eagle and Lion, the nobleſt Animals in their kinds; and ſo is it applyable unto Princes, Preſidents, Generals and all heroick Commanders; and ſo is it alſo born in the Coat-Arms of many noble Families of *Europe*.

But the original invention ſeems to be Hieroglyphical, derived from the Egyptians, and of an higher ſignification. By the myſtical conjunction of Hawk and Lion, implying either the genial or the ſyderous Sun, the great celerity thereof, and the ſtrength and vigour in its operations. And therefore under ſuch Hieroglyphicks *Oſyris* was deſcribed; and in antient Coins we meet with Gryphins conjointly with *Apollo*'s *Tripodes* and Chariot Wheels; and the Marble Gryphins at S. *Peter*'s in *Rome*, as learned Men conjecture, were firſt tranſlated from the Temple of *Apollo*. Whether hereby were not alſo myſtically implyed the activity of the *Sun* in *Leo*, the power of God in the Sun, or the influence of the Celeſtial *Oſyris*, by *Moptha* the Genius of *Nilus* might alſo be conſidered. And than the learned *Kircherus*, no Man were likely to be a better *Oedipus*.

CHAP. XII.

Of the Phœnix.

THat there is but one Phœnix in the World, which after many hundred years burneth it ſelf, and from the Aſhes thereof ariſeth up another, is a Conceit not new or altogether popular, but of great Antiquity; not only delivered by Humane Authors, but frequently expreſſed alſo by Holy Writers; by *Cyril*, *Epiphanius*, and others, by *Ambroſe* in his Hexameron, and *Tertullian* in his Poem *De Judicio Domini*; but more agreeably unto the preſent Senſe, in his excellent Tract, *De Reſurrectione Carnis*. *Illum dico alitem orientis peculiarem, de ſingularitate famoſum, de poſteritate Monſtruoſum; qui ſemetipſum libenter funerans renovat, natali ſine decedens, atque ſuccedens iterum Phœnix. Ubi jam nemo, iterum ipſe; quia non jam, alius idem.* The Scripture alſo ſeems to favour it, particularly that of *Job* 21. In the Interpretation of *Beda*, *Dicebam, in nidulo meo moriar, & ſicut Phœnix multiplicabo dies*: and *Pſal* 31. Δίκαιος ὡσεὶ φοῖνιξ ἀνθήσει, *vir juſtus ut Phœnix florebit*, as *Tertullian* renders it, and ſo alſo expounds it in his Book before alledged.

Againſt the Story of the Phœnix.

All which notwithſtanding, we cannot preſume the exiſtence of this Animal; nor dare we affirm there is any Phœnix in Nature. For, firſt there wants herein the definitive confirmator and teſt of things uncertain, that is, the ſenſe of Man. For though many Writers have much enlarged hereon, yet is there not any ocular deſcriber, or ſuch as preſumeth to confirm it upon aſpection. And therefore *Herodotus* that led the Story unto the *Greeks*, plainly ſaith, He never attained the ſight of any, but only in the Picture.

Again, Primitive Authors, and from whom the ſtream of Relations is derivative, deliver themſelves very dubiouſly; and either by a doubtful Parentheſis, or a timorous concluſion overthrow the whole Relation. Thus *Herodotus* in his *Euterpe*, delivering the Story hereof, preſently interpoſeth, ἐμοὶ μὲν ἐς πᾶσα λέγονται; that is, which account ſeems to me improbable.

bable. *Tacitus* in his Annals affordeth a larger ſtory, how the Phœnix was firſt ſeen at *Heliopolis* in the reign of *Seſoſtris*, then in the reign of *Amaſis*, after in the days of *Ptolomy*, the third of the *Macedonian* race; but at laſt thus determineth, *Sed Antiquitas obſcura, & nonnulli falſum eſſe hunc Phœnicem neque Arabum è terris credidere.* *Pliny* makes yet a fairer ſtory, that the Phœnix flew into *Egypt* in the Conſulſhip of *Quintus Plancius*, that it was brought to *Rome* in the Cenſorſhip of *Claudius*, in the eight hundredth year of the City, and teſtified alſo in their records; but after all concludeth, *Sed quæ falſa nemo dubitabit*, As we read it in the fair and ancient impreſſion of *Brixa*, as *Aldrovandus* hath quoted it; and it is found in the manuſcript Copy, as *Dalechampius* hath alſo noted.

Moreover, Such as have naturally diſcourſed hereon, have ſo diverſly, contrarily, or contradictorily delivered themſelves, that no affirmative from thence can reaſonably be deduced. For moſt have poſitively denied it, and they which affirm and believe it, aſſign this name unto many, and miſtake two or three in one. So hath that bird been taken for the Phœnix which liveth in *Arabia*, and buildeth its neſt with Cinnamon; by *Herodotus* called *Cinnamulgus*, and by *Ariſtotle*, *Cinnamomus*; and as a fabulous conceit is cenſured by *Scaliger*. Some have conceived that bird to be the Phœnix, which by a *Perſian* name with the *Greeks* is called *Rhyntace*; but how they made this good, we find occaſion of doubt; whilſt we read in the life of *Artaxerxes*, that this is a little bird brought often to their Tables, and wherewith *Paryſatis* cunningly poiſoned the Queen. The *Manucodiata* or Bird of Paradiſe, hath had the honour of this name, and their feathers brought from the *Molucca's* do paſs for thoſe of the Phœnix. Which though promoted by rarity with us, the *Eaſtern* Travellers will hardly admit; who know they are common in thoſe parts, and the ordinary plume of *Janizaries* among the *Turks*. And laſtly, the Bird *Semenda* hath found the ſame appellation, for ſo hath *Scaliger* obſerved and refuted: nor will the ſolitude of the Phœnix allow this denomination; for many there are of that ſpecies, and whoſe trifiſtulary bill and crany we have beheld our ſelves, Nor are men only at variance in regard of the Phœnix it ſelf, but very diſagreeing in the accidents aſcribed thereto: for ſome affirm, it liveth three hundred, ſome five, others ſix, ſome a thouſand, others no leſs than fifteen hundred years; ſome ſay it liveth in *Æthiopia*, others in *Arabia*, ſome in *Egypt*, others in *India*, and ſome in *Utopia*; for ſuch a one muſt that be which is deſcribed by *Lactantius*; that is, which neither was ſinged in the combuſtion of *Phaeton*, nor overwhelmed by the inundation of *Deucalion*.

Laſtly, Many Authors who have diſcourſed hereof, have ſo delivered themſelves, and with ſuch intentions, that we cannot from thence deduce a confirmation. For ſome have written Poetically, as *Ovid*, *Mantuan*, *Lactantius*, *Claudian*, and others: Some have written myſtically, as *Paracelſus* in his Book *De Azoth*, or *De ligno & linea vitæ*; and as ſeveral Hermetical Philoſophers, involving therein the ſecret of their Elixir, and enigmatically expreſſing the nature of their great work. Some have written Rhetorically, and conceſſively, not controverting, but aſſuming the queſtion, which taken as granted, advantaged the illation. So have holy men made uſe hereof as far as thereby to confirm the Reſurrection; for diſcourſing with Heathens who granted the ſtory of the Phœnix, they induced the Reſurrection from principles of their own, and poſitions received among themſelves. Others have ſpoken Emblematically and Hieroglyphically; and ſo did the *Egyptians*, unto whom the Phœnix was the Hieroglyphick of the Sun. And this was probably the ground of the whole relation; ſucceeding Ages adding fabulous accounts, which laid together built up this ſingularity, which every Pen proclaimeth.

As for the Texts of Scripture, which ſeem to confirm the conceit, duly perpended, they add not thereunto. For whereas in that of *Job*, according to the Septuagint or Greek Tranſlation we find the word Phœnix, yet can it have no animal ſignification; for therein it is not expreſſed φοῖνιξ, but στελεχος φοίνικος, the trunk of the Palm-tree, which is alſo called Phœnix; and therefore the conſtruction will be very hard, if not ap-

plied unto ſome vegetable nature. Nor can we ſafely inſiſt upon the Greek expreſſion at all; for though the Vulgar tranſlates it *Palma*, and ſome retain the word Phœnix, others do render it by a word of a different ſenſe; for ſo hath *Tremellius* delivered it: *Dicebam quòd apud nidum meum expirabo, & ſicut arena multiplicabo dies*; ſo hath the *Geneva* and ours tranſlated it, *I ſaid I ſhall die in my Neſt, and ſhall multiply my days as the ſand.* As for that in the Book of Pſalms, *Vir juſtus ut Phœnix florebit*, as *Epiphanius* and *Tertullian* render it, it was only a miſtake upon the *Homonymy of the Greek word Phœnix, which ſignifies alſo a Palm-tree. Which is a fallacy of equivocation, from a community in name inferring a common nature; and whereby we may as firmly conclude, that *Diaphœnicon* a purging Electuary hath ſome part of the Phœnix for its ingredient; which receiveth that name from Dates, or the fruit of the Palm-tree, from whence, as *Pliny* delivers, the Phœnix had its name.

* Conſent of names.

Nor do we only arraign the exiſtence of this Animal, but many things are queſtionable which are aſcribed thereto, eſpecially its unity, long life, and generation. As for its unity or conceit there ſhould be but one in nature, it ſeemeth not only repugnant unto Philoſophy, but alſo holy Scripture; which plainly affirms, there went of every ſort two at leaſt into the Ark of *Noah*, according to the Text, *Every Fowl after his kind, every bird of every ſort, they went into the Ark, two and two of all fleſh, wherein there is the breath of life, and they that went in, went in both male and female of all fleſh.* It infringeth the benediction of God concerning multiplication. God bleſſed them, ſaying, *Be fruitful and multiply, and fill the waters in the Seas, and let Fowl multiply in the earth*: And again, *Bring forth with thee every living thing, that they may breed abundantly in the earth, and be fruitful and multiply upon the earth*: which terms are not appliable unto the Phœnix, whereof there is but one in the world, and no more now living than at the firſt benediction. For the production of one, being the deſtruction of another, although they produce and generate, they encreaſe not; and muſt not be ſaid to multiply, who do not tranſcend an unity.

Gen. 7.

Gen. 1.

Chap. 8.

As for longævity, that it liveth a thouſand years or more; beſide that from imperfect obſervations and rarity of appearance, no confirmation can be made; there may be probably a miſtake in the compute. For the tradition being very ancient and probably Egyptian, the *Greeks* who diſperſed the Fable, might ſumm up the account by their own numeration of years; whereas the conceit might have its original in times of ſhorter compute. For if we ſuppoſe our preſent calculation, the Phœnix now in nature will be the ſixth from the Creation, but in the middle of its years; and if the *Rabbins* * Prophecie ſucceed, ſhall conclude its days not in its own but the laſt and general flames, without all hope of Reviviction.

* That the World ſhould laſt but ſix thouſand years.

Concerning its generation, that without all conjunction it begets and reſeminates it ſelf, hereby we introduce a vegetable production in Animals, and unto ſenſible natures transfer the propriety of Plants; that is, to multiply within themſelves, acording to the Law of the Creation, *Let the earth bring forth graſs, the herb yielding ſeed, and the tree yielding fruit, whoſe ſeed is in it ſelf.* Which is indeed the natural way of Plants, who having diſtinction of ſex, and the power of the ſpecies contained in every *individuum*, beget and propagate themſelves without commixtion; and therefore the fruits proceeding from ſimpler roots, are not ſo unlike, or diſtinguiſhable from each other, as are the off-ſprings of ſenſible creatures and prolifications deſcending from double originals. But Animal generation is accompliſhed by more, and the concurrence of two ſexes is required to the conſtitution of one. And therefore ſuch as have no diſtinction of ſex, engender not at all, as *Ariſtotle* conceives of Eels, and teſtaceous animals. And though Plant-animals do multiply, they do it not by copulation, but in a way analogous unto Plants. So *Hermaphrodites*, although they include the parts of both ſexes, and may be ſufficiently potent in either; yet unto a conception require a ſeparated ſex, and cannot impregnate themſelves. And ſo alſo though *Adam* included all humane nature, or was (as ſome opinion) an *Hermaphrodite*, yet had he no power to propagate himſelf;

Gen. 1.

himself; and therefore God said, *It is not good that man should be alone, let us make him an help meet for him*; that is, an help unto generation? for as for any other help, it had been fitter to have made another man.

Now whereas some affirm that from one Phœnix there doth not immediately proceed another, but the first corrupteth into a worm, which after becometh a Phœnix, it will not make probable this production. For hereby they confound the generation of perfect animals with imperfect, sanguineous with exanguious, vermiparous with oviparous, and erect † Anomalies, disturbing the laws of Nature. Nor will this corruptive production be easily made out in most imperfect generations; for although we deny not that many animals are vermiparous, begetting themselves at a distance, and as it were at the second hand (as generally Insects, and more remarkably Butter-flies and Silk-worms) yet proceeds not this generation from a corruption of themselves, but rather a specifical and seminal diffusion, retaining still the Idea of themselves, though it act that part a while in other shapes. And this will also hold in generations equivocal, and such as are not begotten from Parents like themselves; so from Frogs corrupting, proceed not Frogs again; so if there be anatiferous Trees, whose corruption breaks forth into Bernacles, yet if they corrupt, they degenerate into Maggots, which produce not them again. For this were a confusion of corruptive and seminal production, and a frustration of that seminal power committed to animals at the Creation. The problem might have been spared, *Why we love not our lice as well as our children? Noahs* Ark had been needless, the graves of Animals would be the fruitfullest wombs; for death would not destroy, but empeople the world again.

† Irregularities.

Since therefore we have so slender grounds to confirm the existence of the Phœnix, since there is no ocular witness of it, since as we have declared, by Authors from whom the story is derived, it rather stands rejected; since they who have seriously discoursed hereof, have delivered themselves negatively diversly, or contrarily; since many others cannot be drawn into Argument, as writing Poetically, Rhetorically, Enigmatically, Hieroglyphically; since holy Scripture alledged for it duly perpended, doth not advantage it; and lastly, since so strange a generation, unity and long life, hath neither experience nor reason to confirm it, how far to rely on this tradition, we refer unto consideration.

But surely they were not well-wishers unto parable Physick, or remedies easily acquired, who derived medicines from the Phœnix; as some have done, and are justly condemned by *Pliny*; *Irridere est, vitæ remedia post millesimum annum reditura monstrare*; It is a folly to find out remedies that are not recoverable under a thousand years; or propose the prolonging of life by that which the twentieth generation may never behold. More veniable is a dependance upon the Philosophers stone, potable gold, or any of those *Arcana*'s whereby *Paracelsus* that died himself at forty seven, gloried that he could make other men immortal. Which although extreamly difficult, and *tantum non* infesible, yet are they not impossible, nor do they (rightly understood) impose any violence on Nature. And therefore if strictly taken for the Phœnix, very strange is that which is delivered by *Plutarch*, That the brain thereof is a pleasant bit, but that it causeth the head-ach. Which notwithstanding the luxurious Emperour could never taste, though he had at his Table many a Phœnicopterus, yet had he not one Phœnix; for though he expected and attempted it, we read not in *Lampridius* that he performed it; and considering the unity thereof, it was a vain design, that is, to destroy any species, or mutilate the great accomplishment of six days. And although some conceive, and it may seem true that there is in man a natural possibility to destroy the world in one generation, that is, by a general conspire to know no woman themselves, and disable all others also: yet will this never be effected. And therefore *Cain* after he had killed *Abel*, were there no other woman living, could not have also destroyed *Eve*: which although he had a natural power to effect, yet the execution thereof, the Providence of God would have resisted: for that would have imposed another creation upon him, and to have animated a second Rib of *Adam*.

Εὐπορισία

De sanitate tuenda.

Heliogabalus.

CHAP. XIII.

Of Frogs, Toads, and Toad-ſtone.

COncerning the venemous Urine of Toads, of the ſtone in the Toads head, and of the generation of Frogs, conceptions are entertained which require conſideration. And firſt, that a Toad piſſeth, and this way diffuſeth its venome, is generally received, not only with us, but alſo in other parts; for ſo hath *Scaliger* obſerved in his Comment, *Averſum urinam reddere ob oculos perſecutoris pernicioſam ruricolis perſuaſum eſt*; and *Matthiolus* hath alſo a paſſage, that a Toad communicates its venome, not only by Urine, but by the humidity and ſlaver of its mouth: which notwithſtanding ſtrictly underſtood, may admit of examination: for ſome doubt may be made whether a Toad properly piſſeth, that is, diſtinctly and ſeparately voideth the ſerous excretion: for though not only birds, but oviparous quadrupeds and Serpents have kidneys and ureters, and ſome Fiſhes alſo bladders; yet for the moiſt and dry excretion they ſeem at laſt to have but one vent and common place of excluſion: and with the ſame propriety of language, we may abſcribe that action unto Crows and Kites. And this not onely in Frogs and Toads, but may be enquired in Tortoiſes: that is, whether that be ſtrictly true, or to be taken for a diſtinct and ſeparate miction, when *Ariſtotle* affirmeth, that no oviparous animal, that is, which either ſpawneth or layeth Eggs, doth Urine, except the Tortoiſe.

The ground or occaſion of this expreſſion might from hence ariſe, that Toads are ſometimes obſerved to exclude or ſpirt out a dark and liquid matter behind: which we have obſerved to be true, and a venomous condition there may be perhaps therein, but ſome doubt there may be, whether this is to be called their urine: not becauſe it is emitted averſly or backward, by both ſexes, but becauſe it is confounded with the inteſtinal excretions and egeſtions of the belly: and this way is ordinarily obſerved, although poſſible it is that the liquid excretion may ſometimes be excluded without the other.

As for the ſtone commonly called a Toad-ſtone, which is preſumed to be found in the head of that animal, we firſt conceive it not a thing impoſſible: nor is there any ſubſtantial reaſon why in a Toad there may not be found ſuch hard and lapideous concretions. For the like we daily obſerve in the heads of Fiſhes, as Cods, Carps, and Pearches: the like alſo in Snails, a ſoft and exoſſeous animal, whereof in the naked and greater ſort, as though ſhe would requite the defect of a ſhell on their back, Nature near the head hath placed a flat white ſtone, or rather teſtaceous concretion. Which though *Aldrovandus* affirms, that after diſſection of many, he found but in ſome few, yet of the great gray Snails, I have not met with any that wanted it: and the ſame indeed ſo palpable, that without diſſection it is diſcoverable by the hand.

Again, though it be not impoſſible, yet it is ſurely very rare: as we are induced to believe from ſome enquiry of our own, from the trial of many who have been deceived, and the fruſtrated ſearch of *Porta*, who upon the explorement of many, could ſcarce find one. Nor is it only of rarity, but may be doubted whether it be of exiſtencie, or really any ſuch ſtone in the head of a Toad at all. For although *Lapidaries* and queſtuary enquirers affirm it, yet the Writers of Minerals and natural ſpeculators, are of another belief: conceiving the ſtones which bear this name, to be a Mineral concretion; not to be found in animals, but in fields. And therefore *Boëtius* refers it to *Aſteria* or ſome kind of *Lapis ſtellaris*, and plainly concludeth, *reperiuntur in agris, quos tamen alii in annoſis, ac qui diu in Arundinetis, inter rubos ſenteſque delituerunt, bufonis capitibus generari pertinaciter affirmant.*

Laſtly,

Laſtly, If any ſuch thing there be, yet muſt it not, for ought I ſee, be taken as we receive it, for a looſe and moveable Stone, but rather a concretion or induration of the crany it ſelf; for being of an earthy temper, living in the Earth, and as ſome ſay feeding thereon, ſuch indurations may ſometimes happen. Thus when *Braſſavolus* after a long ſearch had diſcovered one, he affirms it was rather the forehead bone petrified, than a ſtone within the crany; and of this belief was *Geſner*. Which is alſo much confirmed from what is delivered in *Aldrovandus* upon experiment of very many Toads, whoſe cranies or ſculls in time grew hard, and almoſt of a ſtony ſubſtance. All which conſidered, we muſt with circumſpection receive thoſe ſtones which commonly bear this name, much leſs believe the Traditions, that in envy to mankind they are caſt out, or ſwallowed down by the Toad; which cannot conſiſt with *Anatomy*, and with the reſt, enforced this Cenſure from *Boëtius*, *Ab eo tempore pro nugis habui quod de Bufonio Lapide, ejuſque origine traditur.*

What therefore beſt reconcileth theſe divided determinations, may be a middle Opinion; that of theſe Stones ſome may be Mineral, and to be found in the Earth; ſome Animal, to be met with in Toads, at leaſt by the induration of their Cranies. The firſt are many and manifold, to be found in *Germany* and other parts; the laſt are fewer in number, and in ſubſtance not unlike the Stones in Crabs Heads. This is agreeable unto the determination of **Aldrovandus*, and is alſo the judgment of learned † *Spigelius* in his Epiſtle unto *Pignorius*.

* *De Minerali lib.* 4.
† *Muſei Calceolariani Sect.* 3.

But theſe Toadſtones, at leaſt very many thereof, which are eſteemed among us, are at laſt found to be taken not out of Toads Heads, but out of a Fiſhes Mouth, being handſomely contrived out of the Teeth of the *Lupus Marinus*, a Fiſh often taken in our Northern Seas, as was publickly declared by an eminent and learned Phyſician. But becauſe Men are unwilling to conceive ſo low of their Toadſtones which they ſo highly value, they may make ſome trial thereof by a candent or red hot Iron applyed unto the hollow and unpoliſhed part thereof, whereupon if they be true Stones they will not be apt to burn or afford a burnt odour, which they may be apt to do, if contrived out of animal Parts or the Teeth of Fiſhes.

Sir *George Ent.*

Concerning the Generation of Frogs, we ſhall briefly deliver that account which obſervation hath taught us. By Frogs I underſtand not ſuch as ariſing from putrefaction, are bred without copulation, and becauſe they ſubſiſt not long, are called *Temporariæ*; nor do I mean the little Frog of an excellent Parrot-green, that uſually ſits on Trees and Buſhes, and is therefore called *Ranunculus viridis*, or *Arboreus*; but hereby I underſtand the aquatile or Water-Frog, whereof in Ditches and ſtanding Plaſhes we may behold many millions every Spring in *England*. Now theſe do not, as *Pliny* conceiveth, exclude black pieces of Fleſh, which after become Frogs; but they let fall their Spawn in the Water, of excellent uſe in Phyſick, and ſcarce unknown unto any. In this Spawn of a lentous and tranſparent Body, are to be diſcerned many Specks, or little conglobations, which in a ſmall time become of deep black, a ſubſtance more compacted and terreſtrious than the other; for it riſeth not in diſtillation, and affords a Powder when the white and aqueous part is exhaled. Now of this black or duskie ſubſtance is the Frog at laſt formed; as we have beheld, including the Spawn with Water in a Glaſs, and expoſing it unto the Sun. For that black and round ſubſtance, in a few days began to dilate and grow longer, after a while the Head, the Eyes, the Tail to be diſcernable, and at laſt to become that which the Antients called *Gyrinus*, we a *Porwigle* or Tadpole. This in ſome Weeks after becomes a perfect Frog, the Legs growing out before, and the Tail wearing away, to ſupply the other behind; as may be obſerved in ſome which have newly forſaken the Water; for in ſuch, ſome part of the Tail will be ſeen, but curtailed and ſhort, not long and finny as before. A part provided them a while to ſwim and move in the Water, that is, until ſuch time as nature excluded Legs, whereby they might be provided not only to ſwim in the Water, but move upon the Land, according

ing to the amphibious and mixt intention of Nature, that is, to live in both. So that whoever obſerveth the firſt progreſſion of the Seed before motion, or ſhall take notice of the ſtrange indiſtinction of parts in the Tadpole, even when it moveth about, and how ſucceſſively the inward parts do ſeem to diſcover themſelves, until their laſt perfection; may eaſily diſcern the high curioſity of Nature in theſe inferiour Animals, and what a long line is run to make a Frog.

And becauſe many affirm and ſome deliver, that in regard it hath Lungs and breatheth, a Frog may be eaſily drowned; though the reaſon be probable, I find not the experiment anſwerable; for faſtning one about a ſpan under Water, it lived almoſt ſix days. Nor is it only hard to deſtroy one in Water, but difficult alſo at Land: for it will live long after the Lungs and Heart be out; how long it will live in the Seed, or whether the Spawn of this year being preſerved, will not ariſe into Frogs in the next, might alſo be enquired: and we are prepared to try.

CHAP. XIV.

Of the Salamander.

THat a Salamander is able to live in Flames, to endure and put out Fire is an aſſertion, not only of great antiquity, but confirmed by frequent, and not contemptible Teſtimony. The Egyptians have drawn it into their Hieroglyphicks, *Ariſtotle* ſeemeth to imbrace it; more plainly *Nicander*, *Sarenus Sammonicus*, *Ælian* and *Pliny*, who aſſigns the cauſe of this effect: An Animal (ſaith he) ſo cold, that it extinguiſheth the Fire like Ice. All which notwithſtanding, there is on the negative, Authority and Experience; *Sextius* a Phyſician, as *Pliny* delivereth, denyed this effect; *Dioſcorides* affirmed it a point of folly to believe it; *Galen*, that it endureth the Fire a while, but in continuance is conſumed therein. For experimental conviction, *Matthiolus* affirmeth, He ſaw a Salamander burnt in a very ſhort time: and of the like aſſertion is *Amatus Luſitanus*; and moſt plainly *Pierius*, whoſe Words in his Hieroglyphicks are theſe; *Whereas it is commonly ſaid that a Salamander extinguiſheth Fire, we have found by experience, that it is ſo far from quenching hot Coals, that it dyeth immediately therein.* As for the contrary aſſertion of *Ariſtotle*, it is but by hear-ſay, as common Opinion believeth, *Hæc enim* (*ut aiunt*) *ignem ingrediens, eum extingnit*; and therefore there was no abſurdity in *Galen*, when as a * Septical Medicine he commended the Aſhes of a Salamander; and *Magicians* in vain from the power of this Tradition, at the burning of Towns and Houſes expect a relief from Salamanders.

* A corruptive Medicine deſtroying the parts like Arſenick.

The ground of this Opinion, might be ſome ſenſible reſiſtance of Fire obſerved in the Salamander: which being, as *Galen* determineth, cold in the fourth, and moiſt in the third degree, and having alſo a mucous humidity above and under the Skin, by vertue thereof it may a while endure the Flame: which being conſumed, it can reſiſt no more. Such an humidity there is obſerved in Newtes, or Water-Lizards, eſpecially if their Skins be perforated or pricked. Thus will Frogs and Snails endure the Flame: Thus will Whites of Eggs, vitreous or glaſſie Flegm extinguiſh a Coal: Thus are Unguents made which protect a while from the Fire: and thus beſide the *Hirpini* there are later Stories of Men that have paſſed untoucht through the Fire. And therefore ſome truth we allow in the tradition: Truth according unto *Galen*, that it may for a time reſiſt a Flame, or as *Scaliger* avers, extinguiſh or put out a coal; for thus much will many humid Bodies perform:

but

but that it preſerves and lives in that deſtructive Element, is a fallacious enlargement. Nor do we reaſonably conclude, becauſe for a time it endureth Fire, it ſubdueth and extinguiſheth the ſame; becauſe by a cold and aluminous moiſture it is able a while to reſiſt it, from a peculiarity of Nature it ſubſiſteth and liveth in it.

It hath been much promoted by Stories of incombuſtible Napkins and textures which endure the Fire, whoſe Materials are called by the name of Salamanders Wooll. Which many too literally apprehending, conceive ſome inveſting part, or tegument of the Salamander: Wherein beſide that they miſtake the condition of this Animal (which is a kind of Lizard, a Quadruped corticated and depilous, that is, without Wooll, Fur or Hair) they obſerve not the method and general rule of Nature: whereby all Quadrupeds oviparous, as Lizards, Frogs, Tortois, Chameleons, Crocodiles, are without Hair, and have no covering part or hairy inveſtment at all. And if they conceive that from the Skin of the Salamander, theſe incremable pieces are compoſed; beſide the experiments made upon the living, that of *Braſſavolus* will ſtep in, who in the ſearch of this truth, did burn the Skin of one dead.

Nor is this Salamanders Wooll deſumed from any Animal, but a Mineral ſubſtance metaphorically ſo called from this received Opinion. For beſide *Germanicus* his Heart, and *Pyrrhus* his great Toe, which would not burn with the reſt of their Bodies, there are in the number of Minerals ſome Bodies incombuſtible; more remarkably that which the Antients named *Asbeſton*, and *Pancirollus* treats of in the Chapter of *Linum vivum*. Whereof by Art were weaved Napkins, Shirts and Coats, inconſumable by fire; and wherein in ancient times to preſerve their Aſhes pure, and without commixture, they burnt the Bodies of Kings. A Napkin hereof *Pliny* reports that *Nero* had, and the like, ſaith *Paulus Venetus*, the Emperor of *Tartary* ſent unto Pope *Alexander*; and alſo affirms that in ſome part of *Tartary* there were Mines of Iron whoſe Filaments were weaved into incombuſtible Cloth. Which rare Manufacture, although delivered for loſt by *Pancirollus*, yet *Salmuth* his Commentator affirmeth, That one *Podocaterus* a Cyprian, had ſhewed the ſame at *Venice*; and his materials were from *Cyprus*, where indeed *Dioſcorides* placeth them; the ſame is alſo ocularly confirmed by *Vives* upon *Auſtin*, and *Maiolus* in his Colloquies. And thus in our days do Men practiſe to make long-laſting Snaſts for Lamps out of *Alumen plumoſum*; and by the ſame we read in *Pauſanias*, that there always burnt a Lamp before the Image of *Minerva*. *Plutarch. Suetonius.*

CHAP. XV.

Of the Amphisbæna.

THat then Amphisbæna, that is a ſmaller kind of Serpent which moveth forward and backward, hath two Heads, or one at either extream, was affirmed firſt by *Nicander*, and after by many others, by the Author of the Book *De Theriaca ad Piſonem*, aſcribed unto *Galen*; more plainly *Pliny*, *Geminum habet caput, tanquam parum eſſet uno ore effundi venenum*: but *Ælian* moſt confidently, who referring the conceit of *Chimæra* and *Hydra* unto Fables, hath ſet down this as an undeniable truth.

Whereunto while Men aſſent, and can believe a bicipitous conformation in any continued ſpecies, they admit a gemination of principal parts, not naturally diſcovered in any Animal. True it is that other parts in Animals are not equal; for ſome make their progreſſion with many Legs, even to the number of an hundred, as *Juli*, *Scolopendræ*, or ſuch as are termed *Centipedes*: ſome fly with two Wings, as Birds and many Inſects; ſome

ſome with four, as all farinaceous or mealy-winged Animals, as Butterflies and Moths: all vaginipennous or ſheath-winged Inſects, as Beetles and Dorrs. Some have three Teſticles, as *Ariſtotle* ſpeaks of the Buzzard; and ſome have four Stomachs, as horned and ruminating Animals: but for the principal parts, the Liver, Heart, and eſpecially the Brain; regularly they are but one in any kind or ſpecies whatſoever.

And were there any ſuch ſpecies or natural kind of animal, it would be hard to make good thoſe ſix poſitions of Body, which according to the three dimenſions are aſcribed unto every Animal: that is, *infra, ſupra, ante, retro, dextroſum, ſiniſtrorſum:* for if (as it is determined) that be the anterior and upper part, wherein the ſenſes are placed, and that the poſterior and lower part which is oppoſite thereunto, there is no inferior or former part in this Animal; for the ſenſes being placed at both extream, doth make both ends anterior, which is impoſſible; the terms being Relative, which mutually ſubſiſt, and are not without each other. And therefore this duplicity was ill contrived to place one Head at both extreams, and had been more tolerable to have ſettled three or four at one. And therefore alſo Poets have been more reaſonable than Philoſophers, and *Geryon* or *Cerberus* leſs monſtrous than *Amphisbæna*.

Again, if any ſuch thing there were, it were not to be obtruded by the name of *Amphisbæna*, or as an Animal of one denomination; for properly that Animal is not one, but multiplicious or many, which hath a duplicity or gemination of principal parts. And this doth *Ariſtotle* define, when he affirmeth a Monſter is to be eſteemed one or many, according to its principle, which he conceived the Heart, whence he derived the original of Nerves, and thereto aſcribed many acts which Phyſicians aſſign unto the Brain: And therefore if it cannot be called one, which hath a duplicity of Hearts in his ſenſe, it cannot receive that appellation with a plurality of Heads in ours. And this the practice of Chriſtians hath acknowledged, who have baptized theſe geminous Births, and double connaſcencies with ſeveral names, as conceiving in them a diſtinction of Souls upon the divided execution of their Functions; that is, while one wept, the other laughing; while one was ſilent, the other ſpeaking; while one awaked, the other ſleeping; as is declared by three remarkable examples in *Petrarch*, *Vincentius* and the *Scottiſh* Hiſtory of *Buchanan*.

It is not denied there have been bicipitous Serpents with the Head at each extream, for an example hereof we find in *Ariſtotle*, and of the like form in *Aldrovandus* we meet with the Icon of a Lizzard; and of this kind perhaps might that *Amphisbæna* be, the picture whereof *Caſſianus Puteus* ſhewed unto the learned *Faber*. Which double formations do often happen unto multiparous Generations, more eſpecially that of Serpents; whoſe productions being numerous, and their Eggs in Chains or Links together (which ſometime conjoyn and inoculate into each other) they may unite into various ſhapes, and come out in mixed formations. But theſe are monſtrous productions, beſide the intention of Nature, and the ſtatutes of Generation, neither begotten of like Parents, nor begetting the like again, but irregularly produced, do ſtand as Anomalies in the general Book of Nature. Which being ſhifts and forced piece, rather than genuine and proper effects, they afford us no illation; nor is it reaſonable to conclude from a monſtroſity unto a ſpecies, or from accidental effects, unto the regular Works of Nature.

Laſtly, The ground of the conceit was the Figure of this Animal, and motion oft-times both ways; for deſcribed it is to be like a Worm, and ſo equally framed at both extreams, that at an ordinary diſtance it is no eaſie matter to determine which is the Head; and therefore ſome obſerving them to move both ways, have given the appellation of Heads unto both extreams, which is no proper and warrantable denomination; for many Animals with one Head, do ordinarily perform both different and contrary Motions; Crabs move ſideling, Lobſters will ſwim ſwiftly backward, Worms and Leeches will move both ways; and ſo will moſt of thoſe Animals, whoſe bodies conſiſt of round and annulary Fibers, and move by undulation;

undulation; that is, like the waves of the Sea, the one protruding the other, by inversion whereof they make a backward Motion.

Upon the same ground hath arisen the same mistake concerning the *Scolopendra* or hundred footed Insect, as is delivered by *Rhodiginus* from the Scholiast of *Nicander*: *Dicitur à Nicandro, ἀμφικέφαλος, id est, dicephalus aut biceps fictum vero, quoniam retrorsum* (*ut scribit Aristotles*) *arrepit*, observed by *Aldrovandus*, but most plainly by *Muffetus*, who thus concludeth upon the Text of *Nicander*: *Tamen pace tanti authoris dixerim, unicum illi duntaxat caput, licet pari facilitate, prorsum capite, retrorsum ducente caudâ, incedat, quod Nicandro aliisque imposuisse dubito*: that is, under favour of so great an Author, the *Scolopendra* hath but one head, although with equal facility it moveth forward and backward, which I suspect deceived *Nicander*, and others.

And therefore we must crave leave to doubt of this double-headed Serpent until we have the advantage to behold, or have an iterated ocular testimony concerning such as are sometimes mentioned by *American* Relators; and also such as *Cassianus Puteus* shewed in a picture to *Johannes Faber*; and that which is set down under the name of *Amphisbæna Europæa* in his learned Discourse upon *Hernandez* his History of *America*.

CHAP. XVI.

Of the Viper.

THAT the young Vipers force their way through the bowels of their Dam, or that the female Viper in the act of generation bites off the head of the male, in revenge whereof the young ones eat through the womb, and belly of the Female, is a very ancient tradition. In this sence entertained in the Hieroglyphicks of the *Egyptians*; affirmed by *Herodotus*, *Nicander*, *Pliny*, *Plutarch*, *Ælian*, *Jerome*, *Basil*, *Isidore*, seems countenanced by *Aristotle* and his Scholar *Theophrastus*: from hence is commonly assigned the reason why the *Romans* punished *Parricides* by drowning them in a Sack with a Viper. And so perhaps upon the same opinion the men of *Melita* when they saw a Viper upon the hand of *Paul*, said presently without conceit of any other sin, *No doubt this man is a murderer, who though he have escaped the Sea, yet vengeance suffereth him not to live*: that is, he is now paid in his own way, the parricidous Animal and punishment of Murderers is upon him. And though the tradition were currant among the Greeks, to confirm the same the Latine name is introduced, *Vipera quasi vi pariat*; That passage also in the Gospel, *O ye generation of Vipers*! hath found expositions which countenance this conceit. Notwithstanding which authorities, transcribed relations and conjectures, upon enquiry we find the same repugnant unto Experience and Reason.

And first, it seems not only injurious unto the providence of Nature, to ordain a way of production which should destroy the Producer, or contrive the continuation of the Species by the destruction of the Continuator; but it overthrows and frustrates the great Benediction of God, *God blessed them, saying, Be fruitful and multiply.* Now if it be so ordained that some must regularly perish by multiplication, and these be the fruits of fructifying in the Viper: it cannot be said that God did bless, but curse this Animal; *Upon thy belly shalt thou go, and dust shalt thou eat all thy life*, was not so great a punishment unto the Serpent after the Fall, as *Encrease, be fruitful and multiply*, was before. This were to confound the Maledictions of God, and translate the curse of the Woman upon the Serpent: that is, *in dolore paries, in sorrow shalt thou bring forth*; which being proper unto the Woman, is verified best in the Viper, whose delivery is not only accompanied with pain, but also Gen. 1.

so with death it self. And lastly, it overthrows the careful course, and parental provision of Nature, whereby the young ones newly excluded are sustained by the Dam, and protected until they grow up to a sufficiency for themselves. All which is perverted in this eruptive generation: for the Dam being destroyed, the Younglings are left to their own protection: which is not conceivable they can at all perform, and whereof they afford us a remarkable confirmance many days after birth. For the young ones supposed to break through the belly of the Dam, will upon any fright for protection run into it; for then the old one receives them in at her mouth, which way, the fright being past, they will return again, which is a peculiar way of refuge; and although it seem strange, is avowed by frequent experience and undeniable testimony.

As for the experiment, although we have thrice attempted it, it hath not well succeeded; for though we fed them with Milk, Bran, Cheese, *&c.* the Females always died before the young ones were mature for this eruption; but rest sufficiently confirmed in the experiments of worthy enquirers. Wherein to omit the ancient conviction of *Apollonius*, we shall set down some few of Modern Writers. The first, of *Amatus Lusitanus* in his Comment upon *Dioscorides*, *Vidimus nos viperas prægnantes inclusas pixidibus parere, quæ inde ex partu nec mortuæ, nec visceribus perforatæ manserunt.* The second is that of *Scaliger*, *Viperas ab impatientibus moræ fœtibus numerosissimis rumpi atque interire falsum esse scimus, qui in Vincentii Camerini circulatoris lignea theca vidimus, enatas viperellas, parente salvâ.* The last and most plain of *Franciscus Bustamantinus*, a *Spanish* Physician of *Alcala de Henares*, whose words in his third *de Animantibus Scripturæ*, are these: *Cùm verò per me & per alios hæc ipsa disquisissem servatâ Viperinâ progenie, &c.* that is, when by my self and others I had enquired the truth hereof, including Vipers in a glass, and feeding them with Cheese and Bran, I undoubtedly found that the Viper was not delivered by the tearing of her bowels; but I beheld the young ones excluded by the passage of generation, near the orifice of the sledge. Whereto we might also add the ocular confirmation of *Lacuna* upon *Dioscorides*, *Ferdinandus Imperatus*, and that learned Physician of *Naples*, *Aurelius Severinus*.

That Vipers exclude their young ones by an ordinary passage, as other viviparous Creatures.

Now although the Tradition be untrue, there wanted not many grounds which made it plausibly received. The first was a favourable indulgence and special contrivance of Nature; which was the conceit of *Herodotus*, who thus delivereth himself. Fearful Animals, and such as serve for food, Nature hath made more fruitful: but upon the offensive and noxious kind, she hath not conferred fertility. So the Hare that becometh a prey unto Man, unto Beasts, and Fowls of the air, is fruitful even to superfœtation; but the Lion, a fierce and ferocious Animal hath young ones but seldom, and also but one at a time: Vipers indeed although destructive, are fruitful; but lest their number should increase, Providence hath contrived another way to abate it: for in copulation the Female bites off the head of the Male, and the young ones destroy the Mother. But this will not consist with reason, as we have declared before. And if we more nearly consider the condition of Vipers and noxious Animals, we shall discover an higher provision of Nature: how although in their paucity she hath not abridged their malignity, yet hath she notoriously effected it by their secession or latitancy. For not only offensive Insects, as Hornets, Wasps, and the like; but sanguineous corticated Animals, as Serpents, Toads and Lizzards, do lie hid and betake themselves to coverts in the Winter. Whereby most Countries enjoying the immunity of *Ireland* and *Candie*, there ariseth a temporal security from their venoms; and an intermission of their mischiefs, mercifully requiting the time of their activities.

A second ground of this effect, was conceived the justice of Nature, whereby she compensates the death of the Father by the matricide or murder of the Mother: and this was the expression of *Nicander*. But the cause hereof is as improbable as the effect; and were indeed an improvident revenge in the young ones, whereby in consequence, and upon defect of provision they must destroy themselves. And whereas he expres-

seth

seth this decollation of the male by so full a term as ἀποκόπτειν, that is, to cut or lop off, the act is hardly conceivable; for the Viper hath but two considerable teeth, and those so disposed, so slender and needle-pointed, that they are apter for puncture than any act of incision. And if any like action there be, it may be only some fast retention or sudden compression in the *Orgasmus* or fury of their lust; according as that expression of *Horace* is construed concerning *Lydia* and *Telephus*.

——— Sive puer furens,
Impressit memorem dente labris notam.

Others abscribe this effect unto the numerous conception of the Viper; and this was the opinion of *Theophrastus*. Who though he denieth the exesion or forcing through the belly, conceiveth nevertheless that upon a full and plentiful impletion there may perhaps succeed a disruption of the matrix, as it happeneth sometimes in the long and slender fish * *Acus*. Now although in hot Countries, and very numerous conceptions, in the Viper or other Animals, there may sometimes ensue a dilaceration of the genital parts; yet is this a rare and contingent effect, and not a natural and constant way of exclusion. For the wise Creator hath formed the organs of Animals unto their operations, and in whom he ordaineth a numerous conception, in them he hath prepared convenient receptacles, and a sutable way of exclusion.

* Needle-fish, found sometimes upon the Sea-shore, consisting of four lines unto the vent, and six from thence unto the head.

Others do ground this disruption upon their continued or protracted time of delivery, presumed to last twenty days; whereat excluding but one a day, the latter brood impatient, by a forcible proruption anticipate their period of exclusion; and this was the assertion of *Pliny*, *Cæteri tarditatis impatientes prorumpunt latera, occisâ parente*; which was occasioned upon a mistake of the Greek Text in *Aristotle*, τίκτει δὲ ἐν μίᾳ ἡμέρᾳ καθ' ἕν, τίκτει δὲ πλείω ἢ εἴκοσιν, which are literally thus translated, *Parit autem unâ die secundùm unum, parit autem plures quàm viginti*, and may be thus Englished, *She bringeth forth in one day, one by one, and sometimes more than twenty*: and so hath *Scaliger* rendred it, *Sigillatim parit, absolvit unâ die, interdum plures quàm viginti*: But *Pliny*, whom *Gaza* followeth, hath differently translated it, *Singulos diebus singulis parit, numero fere viginti*; whereby he extends the exclusion unto twenty days, which in the textuary sense is fully accomplished in one.

But what hath most advanced it, is a mistake in another text of *Aristotle*, which seemethdirectly to determine this disruption, τίκτει μικρὰ ἐχίδεια ἐν ὑμέσιν ἃι περιρήγνωνται τριταῖοι, ἐνίοτε δὲ καὶ ἔσωθον διαφαγόντα αὐτὰ ἐξέρχεται: which *Gaza* hath thus translated, *Parit catulos obvolutos membranis, quæ tertio die rumpuntur, evenit interdum ut qui in utero adhuc sunt abrosis membranis prorumpant.* Now herein probably *Pliny*, and many since have been mistaken; for the disruption of the membranes or skins, which include the young ones, conceiving a dilaceration of the matrix and belly of the Viper: and concluding from a casual dilaceration, a regular and constant disruption.

As for the Latine word *Vipera*, which in the Etymologie of *Isidore* promoteth this conceit; more properly it may imply *vivipera*. For whereas other Serpents lay Eggs, the Viper excludeth living Animals; and though the *Cerastes* be also viviparous, and we have found formed Snakes in the belly of the *Cicilia* or Slow-worm; yet may the Viper emphatically bear the name. For the notation or Etymology is not of necessity adequate unto the name; and therefore though Animal be deduced from *anima*, yet are there many animations beside, and Plants will challenge a right therein as well as sensible Creatures.

As touching the Text of Scripture, and compellation of the *Pharisees*, by Generation of Vipers, although constructions be made hereof conformable to this Tradition; and it may be plausibly expounded, that out of a viperous condition, they conspired against their Prophets, and destroyed their spiritual Parents; yet (as *Jansenius* observeth) *Gregory*

and *Jerome* do make another conſtruction; apprehending thereby what is uſually implied by that Proverb, *Mali corvi, malum ovum*; that is, of evil parents, an evil generation, a poſterity not unlike their majority; of miſchievous progenitors, a venomous and deſtructive progeny.

And laſtly, Concerning the Hieroglyphical account, according to the Vulgar conception ſet down by *Orus Apollo*, the authority thereof is only Emblematical; for were the conception true or falſe, to their apprehenſions, it expreſſed filial impiety. Which ſtrictly taken, and totally received for truth, might perhaps begin, but ſurely promote this conception.

More doubtful aſſertions have been raiſed of no Animal than the Viper, as we have diſperſedly noted: and *Franciſco Redi* hath amply diſcovered in his noble obſervations of Vipers; from good reaſons and iterated experiments affirming, that a Viper containeth no humour, excrement, or part which either drank or eat, is able to kill any: that the *remorſores* or dog-teeth, are not more than two in either ſex: that theſe teeth are hollow, and though they bite and prick therewith, yet are they not venomous, but only open a way and entrance unto the poyſon, which notwithſtanding is not poyſonous except it touch or attain unto the bloud. And that there is no other poyſon in this Animal, but only that almoſt inſipid liquor like oyl of Almonds, which ſtagnates in the ſheaths and caſes that cover the teeth; and that this proceeds not from the bladder of gall, but is rather generated in the head, and perhaps demitted and ſent from thence into theſe caſes by ſalival conduits and paſſages, which the head communicateth unto them.

CHAP. XVII.

Of Hares.

THE double Sex of ſingle Hares, or that every Hare is both Male and Female, beſide the vulgar opinion, was the affirmative of *Archelaus*, of *Plutarch*, *Philoſtratus*, and many more. Of the ſame belief have been the Jewiſh *Rabbins*: The ſame is likewiſe confirmed from the Hebrew word; which, as though there were no ſingle Males of that kind, hath only obtained a name of the feminine gender. As alſo from the ſymbolical foundation of its prohibition in the Law, and what vices therein it figured; that is, not only puſillanimity and timidity from its temper, feneration or uſury from its fœcundity and ſuperfetation; but from this mixture of Sexes, unnatural venery and degenerous effemination. Nor are there hardly any who either treat of mutation or mixtion of Sexes, who have not left ſome mention of this point; ſome ſpeaking poſitively, others dubiouſly, and moſt reſigning it unto the enquiry of the Reader. Now hereof to ſpeak diſtinctly, they muſt be Male and Female by mutation and ſucceſſion of Sexes; or elſe by compoſition, mixture or union thereof.

Arnabeth.

Levit. 11.

¶ Tranſmutation of Sexes, *viz.* of Women into Men, granted.

As for the mutation of Sexes, or tranſition into one another, we cannot deny it in Hares, it being obſervable in Man. For hereof beſide *Empedocles* or *Tireſias*, there are not a few examples: and though very few, or rather none which have emaſculated or turned women, yet very many who from an eſteem or reality of being Women have infallibly proved Men. Some at the firſt point of their menſtruous eruptions, ſome in the day of their marriage, others many years after: which occaſioned diſputes at Law, and conteſtations concerning a reſtore of the dowry. And that not only mankind, but many other Animals may ſuffer this tranſexion, we will not deny, or hold it at all impoſſible: although I confeſs by reaſon of the poſtick and backward poſition of the feminine parts in Quadrupedes, they can hardly admit the ſubſtitution of a protruſion, effectual unto maſculine generation; except it be in Retromingents, and ſuch as couple backward.

Nor

Nor ſhall we only concede the ſucceſſion of Sexes in ſome, but ſhall not diſpute the tranſition of reputed ſpecies in others; that is, a tranſmutation, or (as *Paracelſians* term it) Tranſplantation of one into another. Hereof in perfect Animals of a congenerous ſeed, or near affinity of natures, examples are not unfrequent, as in Horſes, Aſſes, Dogs, Foxes, Pheaſants, Cocks, *&c.* but in imperfect kinds, and ſuch where the diſcrimination of Sexes is obſcure, theſe transformations are more common; and in ſome within themſelves without commixtion, as particularly in Caterpillars or Silkworms, wherein there is a viſible and triple transfiguration. But in Plants, wherein there is no diſtinction of ſex, theſe tranſplantations are conceived more obvious than any; as that of Barley into Oats, of Wheat into Darnel; and thoſe grains which generally ariſe among Corn, as Cockle, Aracus, Ægilops, and other degenerations, which come up in unexpected ſhapes, when they want the ſupport and maintenance of the primary and maſter-forms. And the ſame do ſome affirm concerning other Plants in leſs analogy of figures; as the mutation of Mint into Creſſes, Baſil into Serpoil, and Turneps into Radiſhes. In all which, as *Severinus* conceiveth, there may be equivocal ſeeds and Hermaphroditical principles, which contain the radicality and power of different forms; thus in the ſeed of Wheat there lieth obſcurely the ſeminality of Darnel, although in a ſecondary or inferiour way, and at ſome diſtance of production; which nevertheleſs if it meet with convenient promotion, or a conflux and conſpiration of cauſes more powerful than the other, it then beginneth to edifie in chief, and contemning the ſuperintendent form, produceth the ſignatures of its ſelf. *In Idea Medicinæ Philoſophica.*

Now therefore although we deny not theſe ſeveral mutations, and do allow that Hares may exchange their ſex, yet this we conceive doth come to paſs but ſometimes, and not in that viciſſitude or annual alternation as is preſumed: That is, from imperfection to perfection, from perfection to imperfection; from female unto male, from male to female again, and ſo in a circle to both, without a permanſion in either. For beſide the inconceivable mutation of temper, which ſhould yearly alternate the ſex, this is injurious unto the order of nature, whoſe operations do reſt in the perfection of their intents; which having once attained, they maintain their accompliſhed ends, and relapſe not again into their progreſſional imperfections. So if in the minority of natural vigor, the parts of ſeminality take place; when upon the encreaſe or growth thereof the maſculine appear, the firſt deſign of nature is atchieved, and thoſe parts are after maintained.

But ſurely it much impeacheth this iterated tranſexion of Hares, if that be true which *Cardan* and other Phyſicians affirm, that Tranſmutation of ſex is only ſo in opinion; and that theſe transfeminated perſons were really men at firſt, although ſucceeding years produced the manifeſto or evidence of their virilities. Which although intended and formed, was not at firſt excluded: and that the examples hereof have undergone no real or new tranſexion, but were Androgynally born, and under ſome kind of *Hermaphrodites*. For though *Galen* do favour the opinion, that the diſtinctive parts of ſexes are only different in poſition, that is, inverſion or protruſion; yet will this hardly be made out from the Anatomy of thoſe parts. The teſticles being ſo ſeated in the female, that they admit not of protruſion; and the neck of the matrix wanting thoſe parts which are diſcoverable in the organ of virility.

The ſecond and moſt received acception, is, that Hares are male and female by conjunction of both ſexes; and ſuch as are found in mankind, Poetically called Hermaphrodites; ſuppoſed to be formed from the equality, or *non victorie* of either ſeed; carrying about them the parts of Man and Woman; although with great variety in perfection, ſite and ability; not only as *Ariſtotle* conceived, with a conſtant impotency in one; but as later Obſervers affirm, ſometimes with ability of either venery. And therefore the providence of ſome Laws have thought good, that at the years of maturity they ſhould elect one ſex, and the errors in the other ſhould ſuffer a ſeverer puniſhment. Whereby endeavouring

to

to prevent incontinency, they unawares enjoyned perpetual chaſtity; for being executive in both parts, and confined unto one, they reſtrained a natural power, and ordained a partial virginity. *Plato* and ſome of the Rabbins proceeded higher, who conceived the firſt Man an Hermaphrodite; and *Marcus Leo*, the learned *Jew*, in ſome ſenſe hath allowed it; affirming that *Adam* in one *ſuppoſitum* without diviſion, contained both Male and Female. And therefore, whereas it is ſaid in the Text, That *God created man in his own image, in the image of God created he him, male and female created he them:* applying the ſingular and plural unto *Adam*, it might denote, that in one ſubſtance, and in himſelf he included both Sexes, which was after divided, and the female called Woman. The opinion of *Ariſtotle* extendeth farther, from whoſe aſſertion all men ſhould be Hermaphrodites; for affirming that Women do not ſpermatize, and confer a place or receptacle rather than eſſential principles of generation, he deductively includes both ſexes in mankind; for from the father proceed not only males and females, but from him alſo muſt Hermaphroditical and Maſculo-feminine generations be derived, and a commixtion of both ſexes ariſe from the ſeed of one. But the Schoolmen have dealt with that ſex more hardly than any other; who though they have not much diſputed their generation, yet have they controverted their Reſurrection, and raiſed a query, whether any at the laſt day ſhould ariſe in the ſex of Women; as may be obſerved in the Supplement of *Aquinas*.

* Conſiſting of man and woman.

Now as we muſt acknowledge this * Androgynal condition in Man, ſo can we not deny the like doth happen in Beaſts. Thus do we read in *Pliny*, That *Nero*'s Chariot was drawn by four Hermaphroditical Mares; and *Cardan* affirms he alſo beheld one at *Antwerp*. And thus may we alſo concede, that Hares have been of both ſexes, and ſome have ocularly confirmed it; but that the whole ſpecies or kind ſhould be biſexous or double-ſexed, we cannot affirm, who have found the parts of male and female reſpectively diſtinct and ſingle in any wherein we have enquired: And the like ſucceſs had *Bacchinus* in ſuch as he diſſected. And whereas it is conceived, that being an harmleſs Animal, and delectable food unto man, nature hath made them with double ſexes, that actively and paſſively performing they might more numerouſly increaſe; we forget an higher providence of nature whereby ſhe eſpecially promotes the multiplication of Hares, which is by ſuperfetation; That is, a conception upon a conception, or an improvement of a ſecond fruit before the firſt be excluded; preventing hereby the uſual intermiſſion and vacant time of generation, which is very common and frequently obſervable in Hares, mentioned long ago by *Ariſtotle*, *Herodotus* and *Pliny*; and we have often obſerved, that after the firſt caſt, there remain ſucceſſive conceptions, and other younglings very immature, and far from their term of excluſion.

Bacch. De Hermaphroditis.

Superfetation poſſible in women, and that unto a perfect birth.

Nor need any man to queſtion this in Hares, for the ſame we obſerve doth ſometime happen in Women; for although it be true, that upon conception the inward orifice of the matrix exactly cloſeth, ſo that it commonly admitteth nothing after; yet falleth it out ſometime, that in the act of coition, the avidity of that part dilateth it ſelf, and receiveth a ſecond burden; which if it happen to be near in time unto the firſt, they do commonly both proceed unto perfection, and have legitimate excluſions, periodically ſucceeding each other: But if the ſuperfetation be made with conſiderable intermiſſion, the latter moſt commonly proves abortive; for the firſt being confirmed, engroſſeth the aliment from the other. However therefore the project of *Julia* ſeem very plauſible, and that way infallible, when ſhe received not her Paſſengers, before ſhe had taken in her lading, yet was there a fallibility therein: nor indeed any abſolute ſecurity in the policy of adultery after conception. For the Matrix (which ſome have called another Animal within us, and which is not ſubjected unto the law of our will) after reception of its proper Tenant, may yet receive a ſtrange and ſpurious inmate. As is confirmable by many examples in *Pliny*; by *Lariſſea* in *Hippocrates*, and that merry one in *Plautus* urged alſo by *Ariſtotle*; that is, of *Iphicles* and *Hercules*, the one

one begat by *Jupiter*, the other by *Amphitryon* upon *Alcmæna*; as alſo in thoſe ſuper-conceptions, where one child was like the father, the other like the adulterer; the one favoured the ſervant, the other reſembled the maſter.

Now the grounds that begat, or much promoted the opinion of a double ſex in Hares, might be ſome little bags or tumours, at firſt glance repreſenting Stones or Teſticles, to be found in both ſexes about the parts of generation; which men obſerving in either ſex, were induced to believe a maſculine ſex in both. But to ſpeak properly, theſe are no Teſticles or parts official unto generation, but glandulous ſubſtances that ſeem to hold the nature of Emunctories. For herein may be perceived ſlender perforations, at which may be expreſſed a black and fæculent matter. If therefore from theſe we ſhall conceive a mixtion of ſexes in Hares, with fairer reaſon we may conclude it in Bevers; whereof both ſexes contain a double Bag or Tumour in the groin, commonly called the Cod of *Caſtor*, as we have delivered before.

Another ground were certain holes or cavities obſervable about the ſiedge; which being perceived in Males, made ſome conceive there might be alſo a feminine nature in them. And upon this very ground, the ſame opinion hath paſſed upon the Hyæna, and is declared by *Ariſtotle*, and thus tranſlated by *Scaliger*; *Quòd autem aiunt utriuſque ſexus habere genitalia, falſum eſt; quod videtur eſſe fœmineum ſub cauda, eſt ſimile figurâ fœminino, verùm pervium non eſt*; and thus is it alſo in Hares, in whom theſe holes, although they ſeem to make a deep cavity, yet do they not perforate the skin, nor hold a community with any part of generation: but were (as *Pliny* delivereth) eſteemed the marks of their age, the number of thoſe deciding their number of years. In which opinion what truth there is we ſhall not contend; for if in other Animals there be authentick notations, if the characters of years be found in the horns of Cows, or in the Antlers of Deer; if we conjecture the age of Horſes from joints in their docks, and undeniably preſume it from their teeth, we cannot affirm, there is in this conceit, any affront unto nature; although whoever enquireth ſhall find no aſſurance therein.

The laſt foundation was Retromingency or piſſing backward; for men obſerving both ſexes to urine backward, or averſly between their Legs, they might conceive there was a fœminine part in both; wherein they are deceived by the ignorance of the juſt and proper ſite of the Pizzel, or part deſigned unto the Excretion of urine; which in the Hare holds not the common poſition, but is averſly ſeated, and in its diſtention enclines unto the Coccyx or Scut. Now from the nature of this poſition, there enſueth a neceſſity of Retrocopulation, which alſo promoteth the conceit: for ſome obſerving them to couple without aſcenſion, have not been able to judge of male or female, or to determine the proper ſex in either. And to ſpeak generally, this way of copulation is not appropriate unto Hares, nor is there one, but many ways of coition: according to divers ſhapes and different conformations. For ſome couple laterally or ſidewiſe, as Worms: ſome circularly or by complication, as Serpents: ſome pronely, that is, by contaction of the ventral parts in both, as Apes, Porcupines, Hedgehogs, and ſuch as are termed *Mollia*, as the Cuttle-fiſh and the Purple; ſome mixtly, that is, the male aſcending the female, or by application of the ventral parts of the one, unto the poſtick parts of the other, as moſt Quadrupeds: Some averſly, as all Cruſtaceous Animals, Lobſters, Shrimps, and Creviſes, and alſo Retromingents, as Panthers, Tygers and Hares. This is the conſtant Law of their Coition, this they obſerve and tranſgreſs not: only the vitioſity of man hath acted the varieties hereof; nor content with a digreſſion from ſex or ſpecies, hath in his own kind run thorow the Anomalies of Venery; and been ſo bold, not only to act, but repreſent to view, the irregular ways of Luſt.

CHAP.

CHAP. XVIII.

Of Moles, or Molls.

THat Moles are blind and have no Eyes, though a common opinion, is received with much variety; ſome affirming only they have no ſight, as *Oppianus*, the Proverb *Talpa Cacior*, and the word σπαλαχία, or *Talpitas*, which in *Heſychius* is made the ſame with *Cæcitas*: ſome that they have Eyes, but no ſight, as the text of *Ariſtotle* ſeems to imply; ſome neither eyes nor ſight, as *Albertus*, *Pliny*, and the vulgar opinion; ſome both eyes and ſight, as *Scaliger*, *Aldrovandus*, and ſome others. Of which Opinions the laſt, with ſome reſtriction, is moſt conſonant unto truth: For that they have eyes in their head, is manifeſt unto any that wants them not in his own; and are diſcoverable, not only in old ones, but as we have obſerved in young and naked conceptions, taken out of the belly of the Dam. And he that exactly enquires into the cavity of their cranies, may perhaps diſcover ſome propagation of Nerves communicated unto theſe parts. But that the humours together with their coats are alſo diſtinct (though *Galen* ſeem to affirm it) tranſcendeth our diſcovery; for ſeparating theſe little Orbs, and including them in magnifying Glaſſes, we diſcerned no more than *Ariſtotle* mentions, τ ὀφθαλμῶν μέλαινα, that is, a black humour, nor any more if they be broken. That therefore they have eyes, we muſt of neceſſity affirm; but that they be comparatively incomplete, we need not to deny: So *Galen* affirms the parts of generation in women are imperfect, in reſpect of thoſe of men, as the eyes of Moles in regard of other Animals: So *Ariſtotle* terms them πεπεμμένους, which *Gaza* tranſlates *Oblæſos*, and *Scaliger* by a word of imperfection *Inchoatos*.

Now as that they have eyes is manifeſt unto Senſe; ſo that they have ſight, not incongruous unto Reaſon; if we call not in queſtion the providence of this proviſion, that is, to aſſign the Organs, and yet deny the Office; to grant them eyes, and withhold all manner of viſion. For as the inference is fair, affirmatively deduced from the action to the Organ, that they have eyes becauſe they ſee; ſo is it alſo from the organ to the action, that they have eyes, therefore ſome ſight deſigned, if we take the intention of Nature in every ſpecies, and except the caſual impediments, or morboſities in individuals. But as their eyes are more imperfect than others, ſo do we conceive of their ſight or act of viſion, for they will run againſt things, and hudling forwards fall from high places. So that they are not blind, nor yet diſtinctly ſee; there is in them no Cecity, yet more than a Cecutiency; they have ſight enough to diſcern the light, though not perhaps to diſtinguiſh of objects or colours; ſo are they not exactly blind, for light is one object of viſion. And this (as *Scaliger* obſerveth) might be as full a ſight as Nature firſt intended, for living in darkneſs under the earth, they had no further need of eyes than to avoid the light; and to be ſenſible when ever they loſt that darkneſs of earth, which was their natural confinement. And therefore however Tranſlators do render the word of *Ariſtotle* or *Galen*, that is, *imperfectos*, *oblæſos* or *inchoatos*, it is not much conſiderable; for their eyes are ſufficiently begun to finiſh this action, and competently perfect for this imperfect Viſion.

And laſtly, Although they had neither eyes nor ſight, yet could they not be termed blind. For blindneſs being a private term unto ſight, this appellation is not admittible in propriety of ſpeech, and will overthrow the doctrine of privations; which preſuppoſe poſitive forms or habits, and are not indefinite negations, denying in all ſubjects, but ſuch alone wherein the poſitive habits are in their proper Nature, and placed without repugnancy. So do we improperly ſay a Mole is blind, if we deny it the Organs or a capacity of viſion from its created

created Nature; ſo when the text of *John* had ſaid, that perſon was blind from his nativity, whoſe cecity our Saviour cured, it was not warrantable in *Nonnus* to ſay he had no eyes at all, as in the judgment of *Heinſius*, he deſcribeth in his paraphraſe; and as ſome ancient Fathers affirm, that by this Miracle they were created in him. And ſo though the ſenſe may be accepted, that Proverb muſt be candidly interpreted, which maketh fiſhes Mute; and calls them ſilent which have no voice in Nature.

Now this conceit is erected upon a miſapprehenſion or miſtake in the ſymptomes of viſion; men confounding aboliſhment, diminution and depravement, and naming that an abolition of ſight, which indeed is but an abatement. For if viſion be aboliſhed, it is called *cæcitas*, or blindneſs; if depraved, and receive its objects erroneouſly, Hallucination; if diminiſhed, *hebetudo viſus*, *caligatio*, or dimneſs. Now inſtead of a diminution or imperfect viſion in the Mole, we affirm an abolition or total privation; inſtead of a caligation or dimneſs, we conclude a cecity or blindneſs. Which hath been frequently inferred concerning other Animals. So ſome affirm the Water-Rat is blind, ſo *Sammonicus* and *Nicander* do call the *Mus Araneus* the Shrew or Ranney, blind: And becauſe darkneſs was before light, the *Ægyptians* worſhipped the ſame. So are *Cæciliæ* or Slow-worms accounted blind: and the like we affirm proverbially of the Beetle; although their eyes be evident, and they will flye againſt lights, like many other Inſects; and though alſo *Ariſtotle* determines, that the eyes are apparent in all flying Inſects, though other ſenſes be obſcure, and not perceptible at all. And if from a diminution we may infer a total privation, or affirm that other Animals are blind which do not acutely ſee, or comparatively unto others, we ſhall condemn unto blindneſs many not ſo eſteemed; for ſuch as have corneous or horney eyes, as Lobſters and cruſtaceous Animals, are generally dim-ſighted; all Inſects that have *antennæ*, or long horns to feel out their way, as Butterflyes and Locuſts; or their fore-legs ſo diſpoſed, that they much advance before their heads, as may be obſerved in Spiders; and if the Eagle were judge, we might be blind our ſelves. The expreſſion therefore of Scripture in the ſtory of *Jacob* is ſurely with circumſpection: And it came to paſs when *Jacob* was old, and his eyes were dim, *quando caligârunt oculi*, ſaith *Jerome* and *Tremellius*, which are expreſſions of diminution, and not of abſolute privation.

Other concerns there are of Moles, which though not commonly opinioned, are not commonly enough conſidered: As the peculiar formation of their feet, the ſlender *oſſa Jugalia*, and Dogteeth, and how hard it is to keep them alive out of the Earth: As alſo the ferity and voracity of theſe animals; for though they be contented with Roots, and ſtringy parts of Plants, or Worms under ground, yet when they are above it, they will ſometimes tear and eat one another, and in a large glaſs wherein a Mole, a Toad, and a Viper were incloſed, we have known the Mole to diſpatch them, and to devour a good part of them both.

CHAP. XIX.

Of Lampries.

WHether Lampries have nine eyes, as is received, we durſt refer it unto *Polyphemus*, who had but one, to judge it. An error concerning eyes, occaſioned by the error of eyes; deduced from the appearance of divers cavities or holes on either ſide, which ſome call eyes that careleſly behold them; and is not only refutable by experience, but alſo repugnant unto Reaſon. For beſide the monſtroſity they faſten unto Nature, in contriving many eyes, who hath made but two unto any Animal, that is, one of each ſide, according to the diviſion of the brain; it were a ſuperfluous inartificial act to place and ſettle ſo many in one plane; for the two extreams would ſufficiently perform the office of ſight without the help of the intermediate eyes, and behold as much as all ſeven joyned together. For the viſible baſe of the object would be defined by theſe two; and the middle eyes, although they behold the ſame thing, yet could they not behold ſo much thereof as theſe; ſo were it no advantage unto man to have a third eye between thoſe two he hath already; and the fiction of *Argus* ſeems more reaſonable than this; for though he had many eyes, yet were they placed in circumference and poſitions of advantage, and ſo are they placed in ſeveral lines in Spiders.

All ſenſe is from the brain.

Again, Theſe cavities which men calls eyes are ſeated out of the head, and where the Gills of other fiſh are placed; containing no Organs of ſight, nor having any Communication with the brain. Now all ſenſe proceeding from the brain, and that being placed (as *Galen* obſerveth) in the upper part of the body, for the fitter ſituation of the eyes, and conveniency required unto ſight; it is not reaſonable to imagine that they are any where elſe, or deſerve that name which are ſeated in other parts. And therefore we relinquiſh as fabulous what is delivered of *Sternophthalmi*, or men with eyes in their breaſt; and when it is ſaid by *Solomon*, A wiſe mans eyes are in his head, it is to be taken in a ſecond ſenſe, and affordeth no objection. True it is that the eyes of Animals are ſeated with ſome difference, but in ſanguineous animals in the head, and that more forward than the ear or hole of hearing. In quadrupedes, in regard of the figure of their heads, they are placed at ſome diſtance; in latiroſtrous and flat-bill'd birds they are more laterally ſeated; and therefore when they look intently they turn one eye upon the object; and can convert their heads to ſee before and behind, and to behold two oppoſite points at once. But at a more eaſie diſtance are they ſituated in man, and in the ſame circumference with the ear; for if one foot of the compaſs be placed upon the Crown, a circle deſcribed thereby will interſect, or paſs over both the ears.

To what uſe the nine eyes in a Lampric do ſerve.

The error in this conceit conſiſts in the ignorance of theſe cavitities, and their proper uſe in nature; for this is a particular diſpoſure of parts, and a peculiar conformation whereby theſe holes and ſluices ſupply the defect of Gills, and are aſſiſted by the conduit in the head; for like cetaceous Animals and Whales, the Lamprie hath a *fiſtula*, ſpout or pipe at the back part of the head, whereat it ſpurts out water. Nor is it only ſingular in this formation, but alſo in many other; as in defect of bones, whereof it hath not one, and for the ſpine or backbone, a cartilaginous ſubſtance without any ſpondyls, proceſſes or protuberance whatſoever. As alſo in the proviſion which Nature hath made for the heart; which in this animal is very ſtrangely ſecured, and lies immured in a cartilage or griſtly ſubſtance. And laſtly, in the colour of the liver: which is in the Male of an excellent graſs-green: but of a deeper colour in the Female, and will communicate a freſh and durable verdure.

CHAP.

CHAP. XX.

Of Snails.

WHether *Snails* have eyes ſome Learned men have doubted. For *Scaliger* terms them but imitations of eyes; and *Ariſtotle* upon conſequence denyeth them, when he affirms that Teſtaceous Animals have no eyes. But this now ſeems ſufficiently aſſerted by the help of exquiſite Glaſſes, which diſcover thoſe black and atramentous ſpots or globules to be their eyes.

That they have two eyes is the common opinion; but if they have two eyes, we may grant them to have no leſs than four, that is, two in the larger extenſions above, and two in the ſhorter and leſſer horns below, and this number may be allowed in theſe inferiour and exanguious animals; ſince we may obſerve the articulate and latticed eyes in Flies, and nine in ſome Spiders: And in the great *Phalangium* Spider of *America*, we plainly number eight.

But in ſanguineous animals, quadrupeds, bipeds, or man, no ſuch number can be regularly verified, or multiplicity of eyes confirmed. And therefore what hath been under this kind delivered, concerning the plurality, paucity or anomalous ſituation of eyes, is either monſtrous, fabulous, or under things never ſeen includes good ſenſe or meaning. And ſo may we receive the figment of *Argus*, who was an Hieroglyphick of heaven, in thoſe centuries of eyes expreſſing the Stars; and their alternate wakings, the viciſſitude of day and night. Which ſtrictly taken cannot be admitted; for the ſubject of ſleep is not the eye, but the common ſenſe, which once aſleep, all eyes muſt be at reſt. And therefore what is delivered as an Embleme of vigilancy, that the Hare and Lion do ſleep with one eye open, doth not evince they are any more awake than if they were both cloſed. For the open eye beholds in ſleep no more than that which is cloſed; and no more one eye in them than two in other Animals that ſleep with both open, as ſome by diſeaſe, and others naturally which have no eye-lids at all.

How things happen to be ſeen as double.

As for *Polyphemus*, although the ſtory be fabulous, the monſtroſity is not impoſſible. For the act of Viſion may be performed with one eye; and in the deception and fallacy of ſight, hath this advantage of two, that it beholds not objects double, or ſees two things for one. For this doth happen when the *axis* of the viſive cones, diffuſed from the object, fall not upon the ſame plane; but that which is conveyed into one eye, is more depreſſed or elevated than that which enters the other. So if beholding a Candle, we protrude either upward or downward the pupill of one eye, the object will appear double; but if we ſhut the other eye, and behold it with one, it will then appear but ſingle; and if we abduce the eye unto either corner, the object will not duplicate: for in that poſition the *axis* of the cones remains in the ſame plane, as is demonſtrated in the Opticks, and delivered by *Galen*, in his tenth *De uſu partium*.

Relations alſo there are of men that could make themſelves inviſible, which belongs not to this Diſcourſe: but may ſerve as notable expreſſions of wiſe and prudent men, who ſo contrive their affairs, that although their actions be manifeſt, their deſigns are not diſcoverable. In this acception there is nothing left of doubt, and *Giges* Ring remaineth ſtill amongſt us: for vulgar eyes behold no more of wiſe men than doth the Sun: they may diſcover their exteriour and outward ways, but their interiour and inward pieces he only ſees, that ſees into their beings.

CHAP. XXI.

Of the Chameleon.

CONcerning the *Chameleon* there generally paſſeth an opinion that it liveth only upon air, and is ſuſtained by no other aliment: Thus much is in plain terms affirmed by *Solinus*, *Pliny*, and others, and by this Periphraſis is the ſame deſcribed by *Ovid.* All which notwithſtanding, upon enquiry I find the aſſertion mainly controvertible, and very much to fail in the three inducements of belief.

And firſt for its Verity, although aſſerted by ſome, and traditionally delivered by others, yet is it very queſtionable. For beſide *Ælian*, who is ſeldom defective in theſe accounts; *Ariſtotle* diſtinctly treating hereof, hath made no mention of this remarkable propriety: which either ſuſpecting its verity, or preſuming its falſity, he ſurely omitted: for that he remained ignorant of this account, it is not eaſily conceivable; it being the common opinion, and generally received by all men. Some have poſitively denyed it, as *Auguſtinus*, *Niphus*, *Stobæus*, *Dalechampius*, *Fortunius Licetus*, with many more; others have experimentally refuted it, as namely *Johannes Landius*, who in the relation of *Scaliger*, obſerved a *Chameleon*, to lick up a fly from his breaſt: But *Bellonius* hath been more ſatisfactorily experimental, not only affirming they feed on Flies, Caterpillars, Beetles and other Inſects, but upon exenteration he found theſe Animals in their bellies: whereto we might alſo add the experimental deciſions of the worthy *Peireſchius* and learned *Emanuel Tizzanius*, in that *Chameleon* which had been often obſerved to drink water, and delight to feed on Meal-worms. And although we have not had the advantage of our own obſervation, yet have we received the like confirmation from many ocular Spectators.

Comment in Occll. *Lucan.*

As touching the veriſimility or probable truth of this relation, ſeveral reaſons there are which ſeem to overthrow it. For firſt, there are found in this Animal, the guts, the ſtomach and other parts official unto nutrition; which, were its aliment the empty reception of air, their proviſions had been ſuperfluous. Now the wiſdom of nature abhorring ſuperfluities, and effecting nothing in vain, unto the intention of theſe operations, reſpectively contriveth the Organs; and therefore where we find ſuch Inſtruments we may with ſtrictneſs expect their actions; and where we diſcover them not, we may with ſafety conclude the non-intention of their operations. So when we perceive that Bats have teats, it is not unreaſonable to infer they ſuckle their younglings with milk: but whereas no other flying Animal hath theſe parts, we cannot from them expect a viviparous excluſion, but either a generation of eggs, or ſome vermiparous ſeparation, whoſe navel is within it ſelf at firſt, and its nutrition after not connexedly depending of its original

Again, Nature is ſo far from leaving any one part without its proper action, that ſhe oft-times impoſeth two or three labours upon one, ſo the Pizel in Animals is both official unto Urine and to generation, but the firſt and primary uſe is generation; for ſome creatures enjoy that part which urine not. So the noſtrils are uſeful both for reſpiration and ſmelling, but the principal uſe is ſmelling; for many have noſtrils which have no lungs, as fiſhes; but none have lungs or reſpiration, which have not ſome ſhew, or ſome analogy of noſtrils. Thus we perceive the providence of Nature, that is, the wiſdom of God, which diſpoſeth of no part in vain, and ſome parts unto two or three uſes, will not provide any without the execution of its proper office, nor where there is no digeſtion to be made, make any parts inſervient to that intention.

Nature provides no part without its proper function or office.

Beſide

Beſide the remarkable teeth, the tongue of this animal is a ſecond argument to overthrow this airy nutrication: and that not only in its proper nature, but alſo its peculiar figure. For of this part properly taken there are two ends; that is, the formation of the voice, and the execution of taſt: for the voice, it can have no office in *Chameleons*, for they are mute Animals; as beſide fiſhes, are moſt other ſorts of Lizards.

As for their taſt, if their nutriment be air, neither can it be an Inſtrument thereof; for the body of that element is inguſtible, void of all ſapidity, and without any action of the tongue, is by the rough artery or wezon conducted into the Lungs. And therefore *Pliny* much forgets the ſtrictneſs of his aſſertion, when he alloweth excrements unto that Animal, that feedeth only upon Air; which notwithſtanding with the urine of an Aſs, he commends as a magical Medicine upon our enemies.

The figure of the tongue ſeems alſo to overthrow the preſumption of this aliment, which according to exact delineation, is in this Animal peculiar, and ſeemeth contrived for prey. For in ſo little a creature it is at the leaſt a palm long, and being it ſelf very ſlow in motion, hath in this part a very great agility; withall its food being flies and ſuch as ſuddenly eſcape, it hath in the tongue a mucous and ſlimy extremity, whereby upon a ſudden emiſſion it inviſcates and tangleth thoſe Inſects. And therefore ſome have thought its name not unſuitable unto its nature; the nomination in Greek is a little Lion; not ſo much for the reſemblance of ſhape, as affinity of condition; that is for vigilancy in its prey, and ſudden rapacity thereof, which it performeth not like the Lion with its teeth, but a ſudden and unexpected ejaculation of the tongue. This expoſition is favoured by ſome, eſpecially the old gloſs upon *Leviticus*, whereby in the Tranſlation of *Jerome* and the Septuagint, this Animal is forbidden; what ever it be, it ſeems as reaſonable as that of *Iſidore*, who derives this name *à Camelo & Leone*, as preſuming herein reſemblance with a Camell. χαμαιλέων.

As for the poſſibility hereof, it is not alſo unqueſtionable; and wiſe Men are of opinion, the bodies of Animals cannot receive a proper aliment from Air; for beſide that taſt being (as *Ariſtotle* terms it) a kind of touch; it is required the aliment ſhould be tangible, and fall under the palpable affections of touch: beſide alſo that there is ſome ſapor in all aliments, as being to be diſtinguiſhed and judged by the guſt; which cannot be admitted in Air: Beſide theſe I ſay, if we conſider the nature of aliment, and the proper uſe of air in reſpiration, it will very hardly fall under the name hereof, or properly attain the act of nutrication. Requiſites unto Nutrition.

And firſt concerning its nature, to make a perfect nutrition into the body nouriſhed, there is required a tranſmutation of the nutriment, now where this converſion or aggeneration is made, there is alſo required in the aliment a familiarity of matter, and ſuch a community or vicinity unto a living nature, as by one act of the ſoul may be converted into the body of the living, and enjoy one common ſoul. Which cannot be effected by Air, it concurring only with our fleſh in common principles, which are at the largeſt diſtance from life, and common alſo unto inanimated conſtitutions. And therefore when it is ſaid by *Fernelius*, and aſſerted by divers others, that we are only nouriſhed by living bodies, and ſuch as are ſome way proceeding from them, that is, the fruits, effects, parts, or ſeeds thereof; they have laid out an object very agreeable unto aſſimilation; for theſe indeed are fit to receive a quick and immediate converſion, as holding ſome community with our ſelves, and containing approximate diſpoſitions unto animation.

Secondly, (as is argued by *Ariſtotle* againſt the *Pythagoreans*) whatſoever properly nouriſheth before its aſſimilation, by the action of natural heat it receiveth a corpulency or incraſſation progreſſional unto its converſion; which notwithſtanding cannot be effected upon air; for the action of heat doth not condenſe but rarifie that body, and by attenuation, rather than for nutrition, diſpoſeth it for expulſion.

Thirdly,

Thirdly, (which is the argument of *Hippocrates*) all aliment received into the body, muſt be therein a conſiderable ſpace retained, and not immediately expelled. Now Air, but momentally remaining in our Bodies, it hath no proportionable ſpace for its converſion, only of length enough to refrigerate the heart; which having once performed, leſt being it ſelf heated again, it ſhould ſuffocate that part, it maketh no ſtay, but haſteth back the ſame way it paſſed in.

Fourthly, The uſe of Air attracted by the Lungs, and without which there is no durable continuation in Life, is not the nutrition of parts, but the contemperation and ventilation of that fire always maintained in the forge of Life; whereby, although in ſome manner it concurreth unto nutrition, yet can it not receive the proper name of nutriment. And therefore by *Hippocrates* it is termed *Alimentum non Alimentum*, a nouriſhment and no nouriſhment. That is, in a large acception, but not in propriety of Language; conſerving the body, not nouriſhing the ſame; nor repairing it by aſſimilation, but preſerving it by ventilation; for thereby the natural flame is preſerved from extinction, and ſo the *individuum* ſupported in ſome way like nutrition.

De Alimento.

And though the Air ſo entreth the Lungs, that by its nitrous Spirit it doth affect the heart, and ſeveral ways qualify the blood; and though it be alſo admitted into other parts, even by the meat we chew, yet that it affordeth a proper nutriment alone, is not eaſily made out.

Again, Some are ſo far from affirming the Air to afford any nutriment, that they plainly deny it to be any Element, or that it entreth into mixt bodies as any principle in their compoſitions, but performeth other offices in the Univerſe; as to fill all vacuities about the earth or beneath it, to convey the heat of the Sun, to maintain fires and flames, to ſerve for the flight of Volatils, reſpiration of breathing Animals, and refrigeration of others. And although we receive it as an Element, yet ſince the tranſmutation of Elements and ſimple bodies, is not beyond great queſtion; ſince alſo it is no eaſie matter to demonſtrate that Air is ſo much as convertible into water; how tranſmutable it is into fleſh, may be of deeper doubt.

Wherein Vapour is commonly miſtaken for air.

And although the Air attracted may be conceived to nouriſh the inviſible flame of Life, in as much as common and culinary flames are nouriſhed by the air about them; we make ſome doubt whether Air is the pabulous ſupply of Fire, much leſs that Flame is properly Air kindled. And the ſame before us, hath been denied by the Lord of *Verulam*, in his Tract of Life and Death; and alſo by Dr. *Jordan* in his Book of Mineral waters. For that which ſubſtantially maintaineth the fire, is the combuſtible matter in the kindled body, and not the ambient air, which affordeth exhalation to its fuliginous atomes; nor that which cauſeth the flame properly to be termed air, but rather as he expreſſeth it, The accenſion of fuliginous exhalations, which contain an unctuoſity in them, and ariſe from the matter of fuel, which opinion will ſalve many doubts, whereof the common conceit affordeth no ſolution.

What the matter of Culinary or Kitchin fire is.

As firſt, How fire is ſtricken out of flints? That is, not by kindling the air from the colliſion of two hard bodies; for then Diamonds ſhould do the like better than Flints: But rather from ſulphureous, inflamed, and even vitrified *effluviums* and particles, as hath been obſerved of late. The like ſaith *Jordan* we obſerve in Canes and Woods, that are unctuous and full of oyl, which will yield fire by frication, or colliſion, not by kindling the air about them, but the inflammable oyl within them. Why the fire goes out without air? That is, becauſe the fuliginous exhalations wanting evaporation recoil upon the flame and choak it, as is evident in Cupping-glaſſes; and the artifice of Charcoals, where if the air be altogether excluded, the fire goes out. Why ſome Lamps included in cloſe bodies have burned many hundred years, as that diſcovered in the Sepulchre of *Tullia*, the ſiſter of *Cicero*, and that of *Olibius* many years after, near *Padua*? becauſe whatever was their matter, either a preparation

Why fire goes out commonly wanting air, and why ſometimes continued many ages in flame without fuel.

of

of gold, or *Naphtha*, the duration proceeded from the purity of their oyl which yielded no fuliginous exhalations to ſuffocate the fire; For if air had nouriſhed the flame, it had not continued many minutes, for it would have been ſpent and waſted by the fire. Why a piece of flax will kindle, although it touch not the flame? becauſe the fire extendeth further, than indeed it is viſible, being at ſome diſtance from the wiek, a pellucid and tranſparent body, and thinner than the air it ſelf. Why Metals in their liquation, although they intenſly heat the air above their ſurface, ariſe not yet into a flame, nor kindle the air about them? becauſe their ſulphur is more fixed, and they emit not inflammable exhalations. And laſtly, why a lamp or candle burneth only in the air about it, and inflameth not the air at a diſtance from it? becauſe the flame extendeth not beyond the inflammable effluence, but cloſely adheres unto the original of its inflammation; and therefore it only warmeth, not kindleth the air about it. Which notwithſtanding it will do, if the ambient air be impregnate with ſubtile inflammabilities, and ſuch as are of quick accenſion; as experiment is made in a cloſe room, upon an evaporation of ſpirits of Wine and Camphire; as ſubterraneous fires do ſometimes happen; and as *Creuſa* and *Alexander*'s boy in the bath were ſet on fire by *Naphtha*.

Laſtly, The Element of Air is ſo far from nouriſhing the body, that ſome have queſtioned the power of water; many conceiving it enters not the body in the power of aliment, or that from thence there proceeds a ſubſtantial ſupply. For beſide that ſome Creatures drink not at all; Even unto our ſelves, and more perfect Animals, though many ways aſſiſtent thereto, it performs no ſubſtantial nutrition, ſerving for refrigeration, dilution of ſolid aliment, and its elixation in the ſtomach; which from thence as a vehicle it conveys through leſs acceſſible cavities, and ſo in a rorid ſubſtance through the capillary cavities, into every part; which having performed, it is afterward excluded by Urine, ſweat and ſerous ſepar ations. And this opinion ſurely poſſeſſed the Ancients; for when they ſo highly commended that water which is ſuddenly hot and cold, which is without all ſavour, the lighteſt, the thinneſt, and which will ſooneſt boil Beans or Peaſe, they had no conſideration of nutrition; whereunto had they had reſpect, they would have ſurely commended groſs and turbid ſtreams, in whoſe confuſion at leaſt, there might be contained ſome nutriment; and not jejune or limpid water, nearer the ſimplicity of its Element. Although, I confeſs, our cleareſt waters and ſuch as ſeem ſimple unto ſenſe, are much compounded unto reaſon, as may be obſerved in the evaporation of large quantities of water wherein beſide a terreous reſidence, ſome ſalt is alſo found, as is alſo obſervable in rain water; which appearing pure and empty, is full of ſeminal principles, and carrieth vital atoms of plants and Animals in it, which have not periſhed in the great circulation of nature; as may be diſcovered from ſeveral Inſects generated in rain water, from the prevalent fructification of plants thereby; and (beſide the real plant of *Cornerius*) from vegetable figurations, upon the ſides of glaſſes, ſo rarely delineated in froſts.

A ſeed of plants and animals contained in rain-water. *Zibavius* tom. 4. *Chym.*

All which conſidered, ſeverer heads will be apt enough to conceive the opinion of this Animal, not much unlike that of the *Aſtomi*, or Men without mouths, in *Pliny*; ſutable unto the relation of the Mares in *Spain* and their ſubventaneous conceptions from the Weſtern wind; and in ſome way more unreaſonable than the figment of *Rabican* the famous horſe in *Arioſto*, which being conceived by flame and wind, never taſted graſs, or fed on any groſſer provender than air; for this way of nutrition was anſwerable unto the principles of his generation. Which being not airy but groſs and ſeminal in the *Chameleon*; unto its conſervation there is required a ſolid paſture, and a food congenerous unto the principles of its nature.

The grounds of this opinion are many; the firſt obſerved by *Theophraſtus*, was the inflation or ſwelling of the body, made in this Animal upon inſpiration or drawing in its breath; which people obſerving, have thought it to feed upon air. But this effect is rather occaſioned upon the greatneſs of its

lungs,

lungs, which in this Animal are very large, and by their backward ſituation, afford a more obſervable dilatation; and though their lungs be leſs, the like inflation is alſo obſervable in Toads, but eſpecially in Sentortoiſes.

A ſecond is the continual hiation or holding open its mouth, which men obſerving, conceive the intention thereof to receive the aliment of air; but this is alſo occaſioned by the greatneſs of its lungs; for repletion whereof not having a ſufficient or ready ſupply by its noſtrils, it is enforced to dilate and hold open the jaws.

The third is the paucity of blood obſerved in this Animal, ſcarce at all to be found but in the eye, and about the heart; which defect being obſerved, inclined ſome into thoughts, that the air was a ſufficient maintenance for theſe exanguious parts. But this defect or rather paucity of blood, is alſo agreeable unto many other Animals, whoſe ſolid nutriment we do not controvert; as may be obſerved in other ſorts of Lizards, in Frogs and divers Fiſhes; and therefore an Horſe-leech will not readily faſten upon every fiſh; and we do not read of much blood that was drawn from Frogs by Mice, in that famous battel of *Homer*.

The laſt and moſt common ground which begat or promoted this opinion, is the long continuation hereof without any viſible food, which ſome obſerving, precipitouſly conclude they eat not any at all. It cannot be denied it is (if not the moſt of any) a very abſtemious Animal, and ſuch as by reaſon of its frigidity, paucity of blood, and latitancy in the winter (about which time the obſervations are often made) will long ſubſiſt without a viſible ſuſtentation. But a like condition may be alſo obſerved in many other Animals; for Lizards and Leeches, as we have made trial, will live ſome months without ſuſtenance; and we have included Snails in glaſſes all winter, which have returned to feed again in the ſpring. Now theſe notwithſtanding, are not conceived to paſs all their lives without food; for ſo to argue is fallacious, and is moreover ſufficiently convicted by experience. And therefore probably other relations are of the ſame verity, which are of the like affinity; as is the conceit of the *Rhintace* in *Perſia*, the *Canis Levis* of *America*, and the *Manucodiata* or bird of Paradiſe in *India*.

To aſſign a reaſon of this abſtinence in Animals, or declare how without a ſupply there enſueth no deſtructive exhauſtion, exceedeth the limits and intention of my diſcourſe. *Fortunius Licetus* in his excellent Tract, *de his qui diu vivunt ſine alimento*, hath very ingeniouſly attempted it; deducing the cauſe hereof from an equal conformity of natural heat and moiſture, at leaſt no conſiderable exuperancy, in either; which concurring in an unactive proportion, the natural heat conſumeth not the moiſture (whereby enſueth no exhauſtion) and the condition of natural moiſture is able to reſiſt the ſlender action of heat (whereby it needeth no reparation) and this is evident in Snakes, Lizards, Snails, and divers Inſects latitant many months in the year; which being cold creatures, containing a weak heat in a craſs or copious humidity, do long ſubſiſt without nutrition. For the activity of the agent, being not able to over-maſter the reſiſtance of the patient, there will enſue no deperdition. And upon the like grounds it is, that cold and phlegmatick bodies, and (as *Hippocrates* determineth) that old men will beſt endure faſting. Now the ſame harmony and ſtationary conſtitution, as it happeneth in many ſpecies, ſo doth it fall out ſometime in Individuals. For we read of many who have lived long time without aliment; and beſide deceits and impoſtures, there may be veritable Relations of ſome, who without a miracle, and by peculiarity of temper, have far out-faſted *Elias*. Which notwithſtanding doth not take off the miracle; for that may be miraculouſly effected in one, which is naturally cauſable in another. Some naturally living unto an hundred; unto which age, others notwithſtanding could not attain without a miracle.

CHAP.

CHAP. XXII.

Of the Ostrich.

THe common opinion of the *Ostrich*, *Struthiocamelus* or *Sparrow-Camel* conceives that it digesteth Iron; and this is confirmed by the affirmations of many; beside swarms of others, *Rhodiginus* in his prelections taketh it for granted, *Johannes Langius* in his Epistles pleadeth experiment for it; the common picture also confirmeth it; which usually describeth this Animal with an Horseshoe in its mouth. Notwithstanding upon enquiry we find it very questionable, and the negative seems most reasonably entertained; whose verity indeed we do the rather desire, because hereby we shall relieve our ignorance of one occult quality; for in the list thereof it is accounted, and in that notion imperiously obtruded upon us. For my part, although I have had the sight of this Animal, I have not had the opportunity of its experiment, but have received great occasion of doubt, from learned discourses thereon.

For *Aristotle* and *Oppianus*, who have particularly treated hereof are silent in this singularity; either omitting it as dubious; or as the Comment saith, rejecting it as fabulous. *Pliny* speaketh generally, affirming only, the digestion is wonderful in this Animal; *Ælian* delivereth, that it digesteth stones without any mention of Iron; *Leo Africanus*, who lived in those Countries wherein they most abound, speaketh diminutively, and but half way into this assertion; *Surdum ac simplex animal est, quicquid invenit, absque delectu, usque ad ferrum devorat*: *Fernelius* in his second *De Abditis rerum causis*, extenuates it, and *Riolanus* in his Comment thereof positively denies it. Some have experimentally refuted it, as *Albertus Magnus*; and most plainly *Ulysses Aldrovandus*, whose words are these; *Ego ferri frusta devorare, dum Tridenti essem, observavi, sed quæ incocta rursus excerneret*, that is, at my being at *Trent*, I observed the *Ostrich* to swallow Iron, but yet to exclude it undigested again.

Now beside experiment, it is in vain to attempt against it by Philosophical argument, it being an occult quality, which contemns the law of Reason, and defends it self by admitting no reason at all. As for its possibility we shall not at present dispute; nor will we affirm that Iron ingested, receiveth in the stomach of the *Ostrich* no alteration at all; but if any such there be, we suspect this effect rather from some way of corrosion, than any of digestion; not any liquid reduction or tendance to chylification by the power of natural heat, but rather some attrition from an acid and vitriolous humidity in the stomach, which may absterse and shave the scorious parts thereof. So rusty Iron crammed down the throat of a Cock, will become terse and clear again in its gizzard: So the Counter which according to the relation of *Amatus* remained a whole year in the body of a youth, and came out much consumed at last; might suffer this diminution, rather from sharp and acid humours, than the strength of natural heat, as he supposeth. So silver swallowed and retained some time in the body, will turn black, as if it had been dipped in *Aqua fortis*, or some corrosive water, but Lead will remain unaltered; for that metal containeth in it a sweet Salt or Sugar, whereby it resisteth ordinary corrosion, and will not easily dissolve even in *Aqua fortis*. So when for medical uses, we take down the filings of Iron or Steel, we must not conceive it passeth unaltered from us; for though the grosser parts be excluded again, yet are the dissoluble parts extracted, whereby it becomes effectual in deoppilations; and therefore for speedier operation we make extinctions, infusions, and the like, whereby we extract the salt and active parts of the Medicine; which being in solution, more easily

How (possibly) the stomach of the *Ostrich* may alter Iron

What the Chymists would have by their *Aurum Potabile.*

enter the veins. And this is that the Chymists mainly drive at in the attempt of their *Aurum Potabile*; that is, to reduce that indigestible substance into such a form as may not be ejected by siege, but enter the cavities, and less accessible parts of the body, without corrosion.

The ground of this conceit is its swallowing down fragments of Iron, which men observing, by a froward illation, have therefore conceived it digesteth them; which is an inference not to be admitted, as being a fallacy of the consequent, that is, concluding a position of the consequent, from the position of the antecedent. For many things are swallowed by Animals, rather for condiment, gust or medicament, than any substantial nutriment. So Poultrey, and especially the Turkey, do of themselves take down stones; and we have found at one time in the Gizzard of a Turkey no less than seven hundred. Now these rather concur unto digestion, than are themselves digested; for we have found them also in the guts and excrements; but their descent is very slow, for we have given them stones and small pieces of Iron, which eighteen days after we have found remaining in the Gizzard. And therefore the experiment of *Langius* and others might be fallible, whilst after the taking they expected it should come down within a day or two after.

How Cherry-stones may be thought to prevent surfeits upon eating Cherries.

Thus also we swallow Cherry-stones, but void them unconcocted, and we usually say they preserve us from Surfeit; for being hard bodies they conceive a strong and durable heat in the stomach, and so prevent the crudities of their fruit: And upon the like reason do culinary Operators observe, that flesh boils best, when the bones are boiled with it. Thus Dogs will eat grass, which they digest not: Thus Camels to make the water sapid, do raise the mud with their feet: Thus Horses will knable at walls, Pigeons delight in salt stones. Rats will gnaw Iron, and *Aristotle* saith, the Elephant swalloweth stones. And thus may also the *Ostrich* swallow Iron; not as his proper aliment, but for the ends above expressed, and even as we observe the like in other Animals.

And whether these fragments of Iron and hard substances swallowed by the *Ostrich*, have not also that use in their stomachs, which they have in other Birds; that is, in some way to supply the use of Teeth, by commolition, grinding and compression of their proper aliment, upon the action of the strongly conformed muscles of the stomach, as the honor'd Dr. *Harvey* discourseth, may also be considered.

What effect therefore may be expected from the stomach of an *Ostrich* by application alone to further digestion in ours, beside the experimental refute of *Galen*, we refer it unto considerations above alledged; Or whether there be any more credit to be given unto the Medicine of *Ælian*, who affirms, the stones they swallow have a peculiar vertue for the eyes, than that of *Hermolaus* and *Pliny* drawn from the urine of this Animal; let them determine who can swallow so strange a transmission of qualities, or believe that any Bird or flying Animal doth separately and distinctly urine beside the Bat.

That therefore an *Ostrich* will swallow and take down Iron, is easily to be granted: that oftentimes it passes entire away, if we admit of ocular testimony, is not to be denied. And though some experiment may also plead, that sometimes they are so altered, as not to be found or excluded in any discernable parcels: yet whether this be not effected by some way of corrosion, from sharp and dissolving humidities, rather than any proper digestion, chylifactive mutation, or alimental conversion, is with good reason doubted.

CHAP.

CHAP. XXIII.

Of Unicorns horn.

GReat account and much profit is made of *Unicorns horn*, at leaſt of that which beareth the name thereof; wherein notwithſtanding, many I perceive ſuſpect an Impoſture, and ſome conceive there is no ſuch Animal extant. Herein therefore to draw up our determinations; beſide the ſeveral places of Scripture mentioning this Animal (which ſome may well contend to be only meant of the *Rhinoceros*) we are ſo far from denying there is any *Unicorn* at all, that we affirm there are many kinds thereof. In the number of Quadrupedes, we will concede no leſs than five; that is, the *Indian* Ox, the *Indian* Aſs, the *Rhinoceros*, the *Oryx*, and that which is more eminently termed *Monoceros*, or *Unicornis*. Some in the liſt of Fiſhes; as that deſcribed by *Olaus*, *Albertus* and others: and ſome *Unicorns* we will allow even among Inſects; as thoſe four kinds of naſicornous Beetles deſcribed by *Muffetus*.

Some doubt to be made what DNR ſignifieth in Scripture.

Secondly, Although we concede there be many *Unicorns*, yet are we ſtill to ſeek; for whereunto to affix this Horn in queſtion, or to determine from which thereof we receive this magnified Medicine, we have no aſſurance, or any ſatisfactory deciſion. For although we ſingle out one, and eminently thereto aſſign the name of the *Unicorn*; yet can we not be ſecure what creature is meant thereby; what conſtant ſhape it holdeth, or in what number to be received. For as far as our endeavours diſcover, this Animal is not uniformly deſcribed, but differently ſet forth by thoſe that undertake it. *Pliny* affirmeth, it is a fierce and terrible creature; *Vartomannus*, a tame and manſuete Animal: thoſe which *Garcias ab Horto* deſcribed about the Cape of good hope, were beheld with heads like Horſes; thoſe which *Vartomannus* beheld, he deſcribed with the head of a Deer; *Pliny*, *Ælian*, *Solinus*, and after theſe from ocular aſſurance, *Paulus Venetus* affirmeth, the feet of the *Unicorn* are undivided, and like the Elephant's: But thoſe two which *Vartomannus* beheld at *Mecha*, were, as he deſcribeth, footed like a Goat. As *Ælian* deſcribeth, it is in the bigneſs of an Horſe; as *Vartomannus*, of a Colt; that which *Thevet* ſpeaketh of was not ſo big as an Heifer; but *Paulus Venetus* affirmeth, they are but little leſs than Elephants. Which are diſcriminations very material, and plainly declare, that under the ſame name Authors deſcribe not the ſame Animal: ſo that the *Unicorn*'s Horn of one, is not that of another, although we proclaim an equal vertue in all.

The Unicorn how variouſly reported by Authors.

Thirdly, Although we were agreed what Animal this was, or differed not in its deſcription, yet would this alſo afford but little ſatisfaction; for the Horn we commonly extol, is not the ſame with that of the Ancients. For that, in the deſcription of *Ælian* and *Pliny*, was black: this which is ſhewed amongſt us, is commonly white, none black; and of thoſe five which *Scaliger* beheld, though one ſpadiceous, or of a light red, and two inclining to red, yet was there not any of this complexion among them.

Fourthly, What Horns ſoever they be which paſs amongſt us, they are not ſurely the Horns of any one kind of Animal, but muſt proceed from ſeveral ſorts of *Unicorns*. For ſome are wreathed, ſome not: That famous one which is preſerved at St. *Denis* near *Paris*, hath wreathy ſpires, and cochleary turnings about it, which agreeth with the deſcription of the *Unicorns* Horn in *Ælian*. Thoſe two in the Treaſure of St. *Mark* are plain, and beſt accord with thoſe of the *Indian* Aſs, or the deſcriptions of other *Unicorns*: That in the Repoſitory of the Elector of

Saxony is plain and not hollow, and is believed to be a true Land-*Unicorns* Horn. *Albertus Magnus* deſcribeth one ten foot long, and at the baſe about thirteen inches compaſs: And that of *Antwerp*, which *Goropius Becanus* deſcribeth, is not much inferiour unto it; which beſt agree unto the deſcriptions of the *Sea-Unicorns*; for theſe, as *Olaus* affirmeth, are of that ſtrength and bigneſs, as to be able to penetrate the ribs of Ships. The ſame is more probable, becauſe it was brought from *Iſland*, from whence, as *Becanus* affirmeth, three other were brought in his days; And we have heard of ſome which have been found by the Sea-ſide, and brought unto us from *America*. So that while we commend the *Unicorns* Horn, and conceive it peculiar but unto one Animal; under apprehenſion of the ſame vertue, we uſe very many; and commend that effect from all, which every one confineth unto ſome one he hath either ſeen or deſcribed.

Fifthly, Although there be many *Unicorns*, and conſequently many Horns, yet many there are which bear that name, and currantly paſs among us, which are no Horns at all. Such are thoſe fragments and pieces of *Lapis Ceratites*, commonly termed *Cornu foſſile*, whereof *Boetius* had no leſs than twenty ſeveral ſorts preſented him for *Unicorns* Horn. Hereof in ſubterraneous cavities, and under the earth there are many to be found in ſeveral parts of *Germany*; which are but the lapideſcencies and petrifactive mutations of hard bodies; ſometimes of Horn, of Teeth, of Bones, and Branches of Trees; whereof there are ſome ſo imperfectly converted, as to retain the odor and qualities of their originals, as he relateth of pieces of Aſh and Walnut. Again, in moſt, if not all which paſs amongſt us, and are extolled for precious Horns, we diſcover not an affection common unto other Horns; that is, they mollifie not with fire; they ſoften not upon decoction or infuſion, nor will they afford a gelly, or mucilaginous concretion in either; which notwithſtanding we may effect in Goats horns, Sheeps, Cows and Harts-horn, in the Horn of the *Rhinoceros*, the Horn of the *Priſtis* or Sword-fiſh. Nor do they become friable or eaſily powderable by Philoſophical calcination, That is, from the vapor or ſteam of water, but ſplit and rift contrary to other horns. Briefly, many of thoſe commonly received, and whereof there be ſo many fragments preſerved in *England*, are not only no Horn, but a ſubſtance harder than a Bone, That is, parts of the Tooth of a Morſe or Sea horſe; in the midſt of the ſolider part containing a curdled grain, which is not to be found in Ivory. This in Northern Regions is of frequent uſe for hafts of Knives or hilts of Swords, and being burnt becomes a good remedy for Fluxes: but Antidotally uſed, and expoſed for *Unicorns* Horn, it is an inſufferable deluſion; and with more veniable deceit, it might have been practiſed in Harts-horn.

Unicorns Horn commonly uſed in *England*, what it is.

The like deceit may be practiſed in the teeth of other Sea-animals; in the teeth alſo of the *Hippopotamus*, or great Animal which frequenteth the River *Nilus*: For we read that the ſame was anciently uſed inſtead of Ivory or Elephants Tooth. Nor is it to be omitted, what hath been formerly ſuſpected, but now confirmed by *Olaus Wormius*, and *Thomas Bartholinus* and others, that thoſe long Horns preſerved as precious rarities in many places, are but the Teeth of Narhwhales; to be found abount *Iſland*, *Greenland* and other Northern Regions; of many feet long, commonly wreathed, very deeply faſtned in the upper jaw, and ſtanding directly forward, graphically deſcribed in † *Bartholinus*, according unto one ſent from a Biſhop of *Iſland*, not ſeparated from the crany. Hereof *Mercator* hath taken notice in his deſcription of *Iſland*: ſome relations hereof there ſeem to be in *Purchas*, who alſo delivereth, that the Horn at *Windſor*, was in his ſecond Voyage brought hither by *Forbiſher*. Theſe before the Northern Diſcoveries, as Unknown Rarities, were carried by Merchants into all parts of *Europe*; and though found on the Sea ſhore, were ſold at very high rates; but are now become more common, and probably in time will prove of little eſteem;

† *De unicornu.*

and

and the bargain of *Julius* the third, be accounted a very hard one, who ſtuck not to give many thouſand Crowns for one.

Nor is it great wonder we may be ſo deceived in this, being daily gulled in the brother Antidote Bezoar; whereof though many be falſe, yet one there paſſeth amongſt us of more intolerable deluſion, ſomewhat paler than the true ſtone, and given by women in the extremity of great diſeaſes, which notwithſtanding is no ſtone, but ſeems to be the ſtony ſeed of ſome *Lithoſpermum* or greater Grumwell; or the *Lobus Echinatus* of *Cluſius*, called alſo the Bezoar Nut; for being broken, it diſcovereth a kernel of a leguminous ſmell and taſt, bitter like a Lupine, and will ſwell and ſprout if ſet in the ground, and therefore more ſerviceable for Iſſues, than dangerous and virulent diſeaſes.

Sixthly, Although we were ſatisfied we had the *Unicorns* Horn, yet were it no injury unto reaſon to queſtion the efficacy thereof, or whether thoſe vertues pretended do properly belong unto it. For what we obſerve, (and it eſcaped not the obſervation of *Paulus Jovius* many years paſt) none of the Ancients aſcribed any medicinal or antidotal vertue unto the *Unicorns* Horn; and that which *Ælian* extolleth, who was the firſt and only man of the Ancients who ſpake of the medical vertue of any *Unicorn*, was the Horn of the *Indian Aſs*; whereof, ſaith he, the Princes of thoſe parts make Bowls and drink therein, as preſervatives againſt Poyſon, Convulſions, and the Falling-ſickneſs. Now the deſcription of that Horn is not agreeable unto that we commend; for that (ſaith he) is red above, white below, and black in the middle; which is very different from ours, or any to be ſeen amongſt us. And thus, though the deſcription of the *Unicorn* be very ancient, yet was there of old no vertue aſcribed unto it; and although this amongſt us receive the opinion of the ſame vertue, yet is it not the ſame Horn whereunto the Antients aſcribed it.

Laſtly, Although we allow it an Antidotal efficacy, and ſuch as the Ancients commended, yet are there ſome vertues aſcribed thereto by Moderns not eaſily to be received; and it hath ſurely faln out in this, as other magnified medicines, whoſe operations, effectual in ſome diſeaſes, are preſently extended unto all. That ſome Antidotal quality it may have, we have no reaſon to deny; for ſince Elks Hoofs and Horns are magnified for Epilepſies, ſince not only the bone in the heart, but the Horn of a Deer is * Alexipharmacal, and ingredient into the confection of Hyacinth, and the Electuary of *Maximilian*; we cannot without prejudice except againſt the efficacy of this. But when we affirm it is not only Antidotal to proper venoms, and ſubſtances deſtructive by qualities we cannot expreſs; but that it reſiſteth alſo Sublimate, Arſenick, and Poyſons which kill by ſecond qualities, that is, by corroſion of parts; I doubt we exceed the properties of its nature, and the promiſes of experiment will not ſecure the adventure. And therefore in ſuch extremities whether there be not more probable relief from fat and oyly ſubſtances, which are the open tyrants over ſalt and corroſive bodies, than precious and cordial medicines which operate by ſecret and diſputable proprieties; or whether he that ſwallowed Lime, and drank down Mercury water, did not more reaſonably place his cure in Milk, Butter or Oyl, than if he had recurred unto Pearl and Bezoar, common reaſon at all times, and neceſſity in the like caſe would eaſily determine.

* Expulſive of Poyſons.

Since therefore there be many *Unicorns*; ſince that whereto we appropriate a Horn is ſo variouſly deſcribed, that it ſeemeth either never to have been ſeen by two perſons, or not to have been one Animal; Since though they agreed in the deſcription of the Animal, yet is not the Horn we extol the ſame with that of the Ancients; Since what Horns ſoever they be that paſs among us, they are not the Horns of one, but ſeveral Animals: Since many in common uſe and high eſteem are no Horns at all; Since if they were true Horns, yet might their vertues be queſtioned;

Since

Since though we allowed ſome vertues, yet were not others to be received; with what ſecurity a man may rely on this Remedy, the miſtreſs of Fools hath already inſtructed ſome, and to Wiſdom (which is never too wiſe to learn) it is not too late to conſider.

CHAP. XXIV.

That all Animals of the Land, are in their kind in the Sea.

THat all Animals of the Land, are in their kind in the Sea, although received as a principle, is a tenent very queſtionable, and will admit of reſtraint. For ſome in the Sea are not to be matcht by any enquiry at Land, and hold thoſe ſhapes which terreſtrious forms approach not; as may be obſerved in the Moon-fiſh, or *Orthragoriſcus*, the ſeveral ſorts of *Raia's*, *Torpedo's*, Oyſters, and many more; and ſome there are in the Land which were never maintained to be in the Sea, as Panthers, Hyæna's, Camels, Sheep, Molls, and others, which carry no name in * Ichthyology, nor are to be found in the exact deſcriptions of *Rondeletius*, *Geſner*, or *Aldrovandus*.

* Hiſtory of Fiſhes.

Again, Though many there be which make out their nominations, as the Hedg-hog, Sea-ſerpents and others; yet are there alſo very many that bear the name of Animals at Land, which hold no reſemblance in corporal configuration; in which account we compute *Vulpecula*, *Canis*, *Rana*, *Paſſer*, *Cuculus*, *Aſellus*, *Turdus*, *Lepus*, &c. Wherein while ſome are called the Fox, the Dog, the Sparrow or Frog-fiſh, and are known by common names with thoſe at Land; yet as their deſcribers atteſt, they receive not theſe appellations from a total ſimilitude in figure, but any concurrence in common accidents, in colour, condition or ſingle conformation. As for Sea-horſes which much confirm this aſſertion; in their common deſcriptions, they are but Croteſco delineations which fill up empty ſpaces in Maps, and meer pictorial inventions, not any Phyſical ſhapes: ſutable unto thoſe which (as *Pliny* delivereth) *Praxiteles* long ago ſet out in the Temple of *Domitius*. For that which is commonly called a Sea-horſe, is properly called a Morſe, and makes not out that ſhape. That which the Ancients named *Hippocampus*, is a little Animal about ſix inches long, and not preferred beyond the claſſis of Inſects. That which they termed *Hippopotamus* an amphibious Animal, about the River *Nile*, ſo little reſembleth an Horſe, that as *Matthiolus* obſerveth, in all except the feet, it better makes out a Swine. That which they termed a Lion, was but a kind of Lobſter: that which they called the Bear, was but one kind of Crab: and that which they named *Bos marinus*, was not as we conceive a Fiſh reſembling an Ox, but a Skait or Thornback, ſo named from its bigneſs, expreſſed by the Greek word *Bous*, which is a prefix of augmentation to many words in that language.

And therefore although it be not denied that ſome in the water do carry a juſtifiable reſemblance to ſome at Land, yet are the major part which bear their names, unlike; nor do they otherwiſe reſemble the creatures on earth, than they on earth the Conſtellations which paſs under Animal names in Heaven: nor the Dog-fiſh at Sea much more make out the Dog of the Land, than that his cognominal or name-ſake in the Heavens. Now if from a ſimilitude in ſome, it be reaſonable to infer a correſpondence in all, we may draw this analogy of Animals upon Plants; for Vegetables there are which carry a near and allowable ſimilitude unto Animals. We might alſo conclude that Animal ſhapes were generally made out

in

in Minerals: for ſeveral ſtones there are that bear their names in relation to Animals or their parts, as *Lapis anguinus*, *Conchites*, *Echinites*, *Encephalites*, *Ægophthalmus*, and many more; as will appear in the Writers of Minerals, and eſpecially in *Boëtius* and *Aldrovandus*.

Fab. column. de ſtirp. rariorib., Orchis; Cercopithecophora, Anthropophora.

Moreover if we concede, that the Animals of one Element might bear the names of thoſe in the other, yet in ſtrict reaſon the watery productions ſhould have the prenomination: and they of the Land rather derive their names, than nominate thoſe of the Sea. For the watery plantations were firſt exiſtent, and as they enjoyed a priority in form, had alſo in nature precedent denominations: but falling not under that Nomenclature of *Adam*, which unto terreſtrious Animals aſſigned a name appropriate unto their natures; from ſucceeding ſpectators they received arbitrary appellations; and were reſpectively denominated unto creatures known at Land; who in themſelves had independent names, and not to be called after them which were created before them.

Laſtly, By this aſſertion we reſtrain the Hand of God, and abridge the variety of the creation; making the creatures of one Element, but an acting over thoſe of another, and conjoyning as it were the ſpecies of things which ſtood at diſtance in the intellect of God; and though united in the Chaos, had ſeveral ſeeds of their creation. For although in that indiſtinguiſht maſs, all things ſeemed one; yet ſeparated by the Voice of God, according to their ſpecies, they came out in incommunicated varieties, and irrelative ſeminalities, as well as divided places; and ſo although we ſay the world was made in ſix days, yet was there as it were a world in every one; that is, a diſtinct creation of diſtinguiſht creatures; a diſtinction in time of creatures divided in nature, and a ſeveral approbation and ſurvey in every one.

CHAP. XXV.

Concerning the common courſe of Diet, in making choice of ſome Animals, and abſtaining from eating others.

WHy we confine our food unto certain Animals, and totally reject ſome others; how theſe diſtinctions crept into ſeveral Nations; and whether this practice be built upon ſolid reaſon, or chiefly ſupported by cuſtom or opinion; may admit conſideration.

For firſt there is no abſolute neceſſity to feed on any; and if we reſiſt not the ſtream of Authority, and ſeveral deductions from holy Scripture: there was no *Sarcophagie* before the Flood; and without the eating of fleſh, our fathers from vegetable aliments, preſerved themſelves unto longer lives, than their poſterity by any other. For whereas it is plainly ſaid, *I have given you every herb which is upon the face of all the earth, and every tree, to you it ſhall be for meat*; preſently after the deluge, when the ſame had deſtroyed or infirmed the nature of Vegetables, by an expreſſion of enlargement, it is again delivered: *Every moving thing that liveth, ſhall be meat for you, even as the green herb, have I given you all things.*

Eating of Fleſh.

Gen. 1. 29.

The natural vertue of Vegetables impaired by the deluge.

Gen. 9. 3.

And therefore although it be ſaid that *Abel* was a Shepherd, and it be not readily conceived, the firſt men would keep Sheep, except they made food thereof: great Expoſitors will tell us, that it was partly for their ſkins, wherewith they were cloathed, partly for their milk, whereby they were ſuſtained; and partly for Sacrifices, which they alſo offered.

And

And though it may ſeem improbable, that they offered fleſh, yet ate not thereof; and *Abel* can hardly be ſaid to offer the firſtlings of his flock, and the fat or acceptable part, if men uſed not to taſte the ſame, whereby to raiſe ſuch diſtinctions: ſome will confine the eating of fleſh unto the line of *Cain*, who extended their luxury, and confined not unto the Rule of God. That if at any time the line of *Seth* ate fleſh, it was extraordinary, and only at their Sacrifices; or elſe (as *Grotius* hinteth) if any ſuch practice there were, it was not from the beginning; but from that time when the ways of men were corrupted, and whereof it is ſaid, that the wickedneſs of mans heart was great; the more righteous part of mankind probably conforming unto the diet preſcribed in Paradiſe, and the ſtate of innocency. And yet however the practice of men conformed, this was the injunction of God, and might be therefore ſufficient, without the food of fleſh.

Eating of Fleſh (probably) not ſo common before the flood.

That they fed not on fleſh, at leaſt the faithful party, before the flood, may become more probable, becauſe they refrained the ſame for ſome time after. For ſo was it generally delivered of the golden Age and Reign of *Saturn*; which is conceived the time of *Noah*, before the building of *Babel*. And he that conſidereth how agreeable this is unto the traditions of the *Gentiles*; that that Age was of one Tongue; that *Saturn* devoured all his ſons but three; that he was the ſon of *Oceanus* and *Thetis*; that a Ship was his Symbol; that he taught the culture of Vineyards, and the art of Huſbandry, and was therefore deſcribed with a ſickle, may well conceive, theſe traditions had their original in *Noah*. Nor did this practice terminate in him, but was continued at leaſt in many after: as (beſide the *Pythagoreans* of old, and *Bannyans* now in *India*, who upon ſingle opinions refrain the food of fleſh) ancient Records do hint or plainly deliver. Although we deſcend not ſo low, as that of *Aſclepiades* delivered by *Porphyrius*, that men began to feed on fleſh in the reign of *Pygmaleon* brother of *Dido*, who invented ſeveral torments, to puniſh the eaters of fleſh.

περὶ ἀποχῆς.

Nor did men only refrain from the fleſh of beaſts at firſt, but as ſome will have it, beaſts from one another. And if we ſhould believe very grave conjecturers, carnivorous animals now, were not fleſh-devourers then, according to the expreſſion of the divine proviſion for them. *To every beaſt of the earth, and to every fowl of the air, I have given every green herb for meat, and it was ſo.* As is alſo collected from the ſtore laid up in the Ark; wherein there ſeems to have been no fleſhy proviſion for carnivorous Animals. For of every kind of unclean beaſt there went but two into the Ark: and therefore no ſtock of fleſh to ſuſtain them many days, much leſs almoſt a year.

Gen. 1. 30.

But when ever it be acknowledged that men began to feed on fleſh, yet how they betook themſelves after to particular kinds thereof, with rejection of many others, is a point not clearly determined. As for the diſtinction of clean and unclean beaſts, the original is obſcure, and ſalveth not our practice. For no Animal is naturally unclean, or hath this character in nature; and therefore whether in this diſtinction there were not ſome myſtical intention; whether *Moſes* after the diſtinction made of unclean beaſts, did not name theſe ſo before the flood by anticipation; whether this diſtinction before the flood, were not only in regard of Sacrifices, as that delivered after was in regard of food; (for many were clean for food, which were unclean for ſacrifice) or whether the denomination were but comparative, and of beaſts leſs commodious for food, although not ſimply bad, is not yet reſolved.

How *Moſes* might diſtinguiſh beaſts into clean and unclean before the flood.

And as for the ſame diſtinction in the time of *Moſes*, long after the flood, from thence we hold no reſtriction, as being no rule unto Nations beſide the *Jews* in dietetical conſideration, or natural choice of diet, they being enjoyned or prohibited certain foods upon remote and ſecret intentions. Eſpecially thereby to avoid community with the Gentiles upon promiſcuous commenſality; or to divert them from the Idolatry of *Egypt*

whence

whence they came, they were enjoyned to eat the Gods of *Egypt* in the food of Sheep and Oxen. Withall in this distinction of Animals the consideration was hieroglyphical; in the bosom and inward sense implying an abstinence from certain vices symbolically intimated from the nature of those animals; as may be well made out in the prohibited meat of Swine, Cony, Owl, and many more.

At least the intention was not medical, or such as might oblige unto conformity or imitation; For some we refrain which that Law alloweth, as Locusts and many others; and some it prohibiteth, which are accounted good meat in strict and Medical censure: as (beside many fishes which have not finns and scales,) the Swine, Cony and Hare, a dainty dish with the Antients; as is delivered by *Galen*, testified by *Martial*, as the popular opinion implied, that Men grew fair by the flesh thereof: by the diet of *Cato*, that is Hare and Cabbage; and the *Jus nigrum*, or black broth of the *Spartans*, which was made with the blood and bowels of an Hare. *Inter quadrupedes maxima Lepus.*

And if we take a view of other Nations, we shall discover that they refrained many meats upon like considerations. For in some the abstinence was symbolical; so *Pythagoras* enjoyned abstinence from fish; that is, luxurious and dainty dishes: So according to *Herodotus*, some *Egyptians* refrained swines flesh, as an impure and sordid animal; which whoever but touched, was fain to wash himself.

Some abstained superstitiously or upon religious consideration: So the *Syrians* refrained Fish and Pigeons; the *Egyptians* of old, Dogs, Eeles and Crocodiles; though *Leo Africanus* delivers that many of late, do eat them with good gust: and *Herodotus* also affirmeth, that the *Egyptians* of *Elephantina* (unto whom they were not sacred,) did eat thereof in elder times: and Writers testify, that they are eaten at this day in *India* and *America*. And so, as *Cæsar* reports, unto the antient *Britains* it was piaculous to taste a Goose, which dish at present no Table is without. *Lib. 5. de bello Gall.*

Unto some Nations the abstinence was political, and for some civil advantage: So the *Thessalians* refrained Storks, because they destroyed their Serpents; and the like in sundry animals is observable in other Nations.

And under all these considerations were some animals refrained: so the *Jews* abstained from Swine at first symbolically, as an Emblem of impurity; and not for fear of the Leprosie, as *Tacitus* would put upon them. The *Cretians* superstitiously, upon tradition that *Jupiter* was suckled in that Countrey by a Sow. Some *Egyptians* politically, because they supplyed the labour of plowing by rooting up the ground. And upon like considerations perhaps the *Phœnicians* and *Syrians* fed not on this Animal: and as *Solinus* reports, the *Arabians* also and *Indians*. A great part of mankind refraining one of the best foods, and such as *Pythagoras* himself would eat; who, as *Aristoxenus* records, refused not to feed on Pigs. *Aul. Gell.* lib. 4.

Moreover while we single out several dishes and reject others, the selection seems but arbitrary, or upon opinion; for many are commended and cryed up in one age, which are decryed and nauseated in another. Thus in the dayes of *Mecænas*, no flesh was preferred before young Asses; which notwithstanding became abominable unto succeeding appetites. At the table of *Heliogabalus* the combs of Cocks were an esteemed service; which Country stomachs will not admit at ours. The *Sumen* or belly and dugs of Swine with Pig, and sometimes beaten and bruised unto death: the womb of the same Animal, especially that was barren, or else had cast her young ones, though a tough and membranous part, was magnified by Roman Palats; whereunto nevertheless we cannot perswade our stomachs. How *Alec*, *Muria*, and *Garum*, would humour our gust I know not; but surely few there are that could delight in their *Cyceon*; that is, the common draught of Honey, Cheese, parcht Barley-flower, Oyl and Wine; which notwithstanding was a commended mixture, and in high esteem among them. We mortifie our selves with the diet of fish, and think we fare coursly if we refrain from the flesh of other animals. But antiquity held another opinion hereof: when *Pythagoras* in prevention of luxury advised, not so much as to taste on fish. Since,

Certain dishes in great request with the Ancients, nor so much esteemed now.

Since, the *Rhodians* were wont to call them Clowns that eat flesh: and since, *Plato*, to evidence the temperance of the noble *Greeks* before *Troy*, observed, that it was not found they fed on fish, though they lay so long near the *Hellespont*; and was only observed in the companions of *Menelaus*, that being almost starved, they betook themselves to fishing about *Pharos*.

Odyss. 4.

Nor will (I fear) the attest or prescript of Philosophers and Physicians be a sufficient ground to confirm or warrant common practice, as is deducible from ancient Writers, from *Hippocrates*, *Galen*, *Simeon*, *Sethi* and the latter tracts of *Nonnus* and *Castellanus*. So *Aristotle* and *Albertus* commend the flesh of young Hawks: *Galen* the flesh of Foxes about Autumn when they feed on Grapes: but condemneth Quails, and ranketh Geese but with Ostriches: which notwithstanding, present practice and every table extolleth. Men think they have fared hardly, if in times of extremity they have descended so low as Dogs: but *Galen* delivereth, that young, fat and gelded, they were the food of many Nations: and *Hippocrates* ranketh the flesh of Whelps with that of Birds; who also commends them against the Spleen, and to promote conception. The opinion in *Galen*'s time, which *Pliny* also followeth, deeply condemned Horseflesh, and conceived the very blood thereof destructive; but no diet is more common among the *Tartars*, who also drink their blood. And though this may only seem an adventure of *Northern* stomachs, yet as *Herodotus* tells us, in the hotter clime of *Persia*, the same was a convivial dish, and solemnly eaten at the feasts of their Nativities: whereat they dressed whole Horses, Camels and Asses; contemning the Poverty of *Grecian* feasts, as unfurnish'd of dishes sufficient to fill the bellies of their Guests.

Non. *de re cibaria.*
Cast. *de sucarnium.*
Gal. *Alim. fac. lib.* 3.
Gal. *Simpl. fac. lib.* 3.
Hip. *de morbis de superfit.*

Again, While we confine our diet in several places, all things almost are eaten, if we take in the whole earth: for that which is refused in one Country, is accepted in another, and in the collective judgment of the world, particular distinctions are overthrown. Thus were it not hard to shew, that Tigers, Elephants, Camels, Mice, Bats and others, are the food of several Countries; and *Lerius* with others delivers, that some *Americans* eat of all kinds, not refraining Toads and Serpents: and some have run so high, as not to spare the flesh of man: a practice inexcusable, nor to be drawn into example, a diet beyond the rule and largest indulgence of God.

As for the objection against beasts and birds of prey, it acquitteth not our practice, who observe not this distinction in fishes; nor regard the same in our diet of Pikes, Perches and Eels: Nor are we excused herein, if we examine the stomachs of Mackerels, Cods, and Whitings. Nor is the foulness of food sufficient to justifie our choice; for (beside that their natural heat is able to convert the same into laudable aliment) we refuse not many whose diet is more impure than some which we reject; as may be considered in Hogs, Ducks, Puets, and many more.

Thus we perceive the practice of diet doth hold no certain course, nor solid rule of selection or confinement; Some in an indistinct voracity eating almost any, others out of a timorous pre-opinion, refraining very many. Wherein indeed Necessity, Reason and Physick, are the best determinators. Surely many animals may be fed on, like many Plants; though not in alimental, yet medical considerations: Whereas having raised Antipathies by prejudgement or education, we often nauseate proper meats, and abhor that diet which disease or temper requireth.

A problem.

Now whether it were not best to conform unto the simple diet of our forefathers; whether pure and simple waters were not more healthfull than fermented liquors; whether there be not an ample sufficiency without all flesh, in the food of honey, oyl, and the several parts of milk; in the variety of grains, pulses, and all sorts of fruits; since either bread or beverage may be made almost of all? whether Nations have rightly confined unto several meats? or whether the common food of one Countrey be not more agreeable unto another? how indistinctly all tempers apply unto the same, and how the diet of youth and old age is confounded; were considerations much concerning health, and might prolong our days, but must not this Discourse.

CHAP.

CHAP. XXVI.

Of Sperma Ceti, *and the* Sperma Ceti *Whale.*

WHat *Sperma Ceti* is Men might justly doubt, since the learned *Hofmannus* in his work of Thirty years, saith plainly, *Nescio quid sit.* And therefore need not wonder at the variety of opinions; while some conceived it to be *flos maris*; and many, a bituminous substance floating upon the Sea. *De medicamentis officin.*

That it was not the spawn of the Whale, according to vulgar conceit or nominal appellation Philosophers have always doubted, not easily conceiving the Seminal humour of Animals, should be inflammable or of a floating nature.

That it proceedeth from the Whale, beside the relation of *Clusius* and other learned observers, was indubitably determined, not many years since by a *Sperma Ceti* Whale, cast on our Coast of *Norfolk*. Which, to lead on further inquiry, we cannot omit to inform. It contained no less than sixty foot in length, the head somewhat peculiar, with a large prominency over the mouth; teeth only in the lower Jaw, received into fleshy sockets in the upper. The Weight of the largest about two pound: No gristly substances in the mouth, commonly called Whale-bones: Only two short Finns seated forwardly on the back; the eyes but small, the pizell large, and prominent. A lesser Whale of this kind above twenty years ago, was cast upon the same shore. Near *Winterton.* Near *Hunstanton.*

The description of this Whale seems omitted by *Gesner*, *Rondeletius*, and the first Editions of *Aldrovandus*; but described in the Latin impression of *Pareus*, in the Exoticks of *Clusius*, and the natural history of *Nirembergius*; but more amply in the Icons and figures of *Johnstonus*.

Mariners (who are not the best Nomenclators) called it a *Jubartas*, or rather *Gibbartas*. Of the same appellation we meet with one in *Rondeletius*, called by the *French* Gibbar, from its round and Gibbous back. The name *Gibbarta* we find also given unto one kind of *Greenland* Whales: but this of ours seemed not to answer the Whale of that denomination; but was more agreeable unto the *Trumpa* or *Sperma Ceti* Whale: according to the account of our *Greenland* describers in *Purchas*. And maketh the third among the eight remarkable Whales of that Coast.

Out of the head of this Whale, having been dead divers days and under putrefaction, flowed streams of oyl and *Sperma Ceti*; which was carefully taken up and preserved by the Coasters. But upon breaking up, the Magazin of *Sperma Ceti* was found in the head lying in folds and courses, in the bigness of goose-Eggs, encompassed with large flakie substances, as large as a Mans head, in form of Hony-combs, very white and full of oyl.

Some resemblance or trace hereof there seems to be in the *Physiter* or *Capidolio* of *Rondeletius*; while he delivers, that a fatness more liquid than oyl, runs from the brain of that animal; which being out, the Reliques are like the scales of *Sardinos* pressed into a mass; which melting with heat, are again concreted by cold. And this many conceive to have been the Fish which swallowed *Jonas*. Although for the largeness of the mouth, and frequency in those Seas, it may possibly be the *Lamia*.

Some part of the *Sperma Ceti* found on the shore was pure, and needed little depuration; a great part mixed with fetid oyl, needing good preparation, and frequent expression, to bring it to a flakie consistency. And not only the head, but other parts contained it. For the carnous parts being roasted, the oyl dropped out, an axungious and thicker part subsiding; the oyl it self contained also much in it, and still after many years some is obtained from it.

Greenland Enquirers ſeldom meet with a Whale of this kind: and therefore it is but a contingent Commodity, not reparable from any other. It flameth white and candent like Camphire, but diſſolveth not in *Aqua fortis* like it. Some lumps containing about two ounces, kept ever ſince in water, afford a freſh, and floſculous ſmell. Well prepared and ſeparated from the oyl, it is of a ſubſtance unlikely to decay, and may outlaſt the oyl required in the Compoſition of *Matthiolus*.

Of the large quantity of oyl, what firſt came forth by expreſſion from the *Sperma Ceti*, grew very white and clear, like that of Almonds or Ben. What came by decoction was red. It was found to ſpend much in the veſſels which contained it: it freezeth or coagulateth quickly with cold, and the newer ſooneſt. It ſeems different from the oyl of any other animal, and very much fruſtrated the expectation of our ſoap-boylers, as not incorporating or mingling with their lyes. But it mixeth well with painting Colours, though hardly drieth at all. Combers of Wooll made uſe hereof, and Country people for cuts, aches and hard tumors. It may prove of good Medical uſe; and ſerve for a ground in compounded oyls and Balſams. Diſtilled, it affords a ſtrong oyl, with a quick and piercing water. Upon Evaporation it gives a Balſame, which is better performed with Turpentine diſtilled with *Sperma Ceti*.

Had the abominable ſcent permitted, enquiry had been made into that ſtrange compoſure of the head, and hillock of fleſh about it. Since the Workmen affirmed, they met with *Sperma Ceti* before they came to the bone, and the head yet preſerved, ſeems to confirm the ſame. The Sphincters inſerving unto the *Fiſtula* or ſpout, might have been examined, ſince they are ſo notably contrived in other cetaceous Animals; as alſo the *Larynx* or Throttle, whether anſwerable unto that of Dolphins and Porpoſes in the ſtrange compoſure and figure which it maketh. What figure the ſtomach maintained in this Animal of one jaw of teeth, ſince in Porpoſes, which abound in both, the ventricle is trebly divided, and ſince in that formerly taken nothing was found but Weeds and a *Loligo*. The heart, lungs, and kidneys had not eſcaped; wherein are remarkable differences from Animals of the land: likewiſe what humor the bladder contained, but eſpecially the ſeminal parts, which might have determined the difference of that humor, from this which beareth its name.

In vain it was to rake for Ambergrieſe in the panch of this *Leviathan*, as *Greenland* diſcoverers, and atteſts of experience dictate, that they ſometimes ſwallow great lumps thereof in the Sea; inſufferable fetor denying that enquiry. And yet if, as *Paracelſus* encourageth, Ordure makes the beſt Musk, and from the moſt fetid ſubſtances may be drawn the moſt odoriferous Eſſences; all that had not *Veſpaſian*'s Noſe, might boldly ſwear, here was a ſubject fit for ſuch extractions.

Cui dulcis odor lucri ex re quálibet.

CHAP. XXVII.

Compendiouſly of ſundry Tenets concerning other Animals, which examined, prove either falſe or dubious.

1. AND firſt from great Antiquity, and before the Melody of *Syrens* the Muſical note of Swans hath been commended, and that they ſing moſt ſweetly before their death. For thus we read in *Plato*, that from the opinion of *Metempſychoſis*, or tranſmigration of the ſouls of men into the bodies of Beaſts moſt ſutable unto their humane condition, after his death, *Orpheus* the Muſician became a Swan. Thus was it the bird of *Apollo*, the God of Muſick, by the *Greeks*; and an Hieroglyphick of muſick among the

the *Egyptians*, from whom the *Greeks* derived the conception; hath been the affirmation of many Latines, and hath not wanted asserters almost from every Nation.

Of Swans, and their singing before death.

All which notwithstanding, we find this relation doubtfully received by *Ælian*, as an hear-say account by *Bellonius*, as a false one by *Pliny*, expressly refuted by *Myndius* in *Athenæus*: and severely rejected by *Scaliger*; whose words unto *Cardan* are these. *De Cygni verò cantu suavissimo quem cum parente mendaciorum Gracia jactare ausus es, ad Luciani tribunal, apud quem novi aliquid dicas, statuo.* Authors also that countenance it, speak not satisfactorily of it. Some affirming they sing not till they dye; some that they sing, yet die not. Some speak generally, as though this note were in all; some but particularly, as though it were only in some; some in places remote, and where we can have no trial of it; others in places where every experience can refute it; as *Aldrovandus* upon relation delivered, concerning the Musick of the Swans on the river of *Thames* near *London*.

The figuration to be found in Elks, and not in common Swans.

Now that which countenanceth and probably confirmeth this opinion, is the strange and unusual conformation of the windpipe, or vocal organ in this animal: observed first by *Aldrovandus*, and conceived by some contrived for this intention. For in its length it far exceedeth the gullet; and hath in the chest a sinuous revolution, that is, when it ariseth from the lungs, it ascendeth not directly unto the throat, but descending first into a capsulary reception of the breast-bone; by a Serpentine and Trumpet recurvation it ascendeth again into the neck; and so by the length thereof a great quantity of air is received, and by the figure thereof a Musical modulation effected. But to speak indifferently, this formation of the Weazon, is not peculiar unto the Swan, but common also unto the *Platea* or Shovelard, a bird of no Musical throat; And as *Aldrovandus* confesseth, may thus be contrived in the Swan to contain a larger stock of air, whereby being to feed on weeds at the bottom, they might the longer space detain their heads under water. But were this formation peculiar, or had they unto this effect an advantage from this part: yet have they a known and open disadvantage from another, that is, a flat bill. For no Latirostrous animal (whereof nevertheless there are no slender numbers) were ever commended for their note, or accounted among those animals which have been instructed to speak.

When therefore we consider the dissention of Authors, the falsity of relations, the indisposition of the Organs, and the immusical note of all we ever beheld or heard of; if generally taken, and comprehending all Swans, or of all places, we cannot assent thereto. Surely he that is bit with a *Tarantula*, shall never be cured by this Musick; and with the same hopes we expect to hear the harmony of the Spheres.

Of the Peacock.

2. That there is a special propriety in the flesh of Peacocks, roasted or boiled, to preserve a long time incorrupted, hath been the assertion of many; stands yet confirmed by *Austin*, *De civitate Dei*; by *Gygas Sempronius*, in *Aldrovandus*; and the same experiment we can confirm our selves, in the brawn or fleshy parts of Peacocks so hanged up with thred, that they touch no place whereby to contract a moisture; and hereof we have made trial both in Summer and Winter. The reason, some, I perceive, attempt to make out from the siccity and driness of its flesh, and some are content to rest in a secret propriety thereof. As for the siccity of the flesh, it is more remarkable in other animals, as Eagles, Hawks, and birds of prey; That it is a propriety or agreeable unto none other, we cannot, with reason, admit: for the same preservation, or rather incorruption we have observed in the flesh of Turkeys, Capons, Hares, Partridge, Venison, suspended freely in the air, and after a year and a half, dogs have not refused to eat them.

As for the other conceit, that a Peacock is ashamed when he looks on his legs, as is commonly held, and also delivered by *Cardan*; beside what hath been said against it by *Scaliger*; let them believe that hold specifical deformities: or that any part can seem unhandsome to their eyes, which hath appeared good and beautiful unto their Makers. The occasion of this conceit might first arise from a common observation, that when they are in their pride,

pride, that is, advance their train, if they decline their neck to the ground, they presently demit, and let fall the same: which indeed they cannot otherwise do; for contracting their body, and being forced to draw in their fore-parts, to establish their hinder in the elevation of their train; if the fore-parts depart and incline to the ground, the hinder grow too weak, and suffer the train to fall. And the same in some degrees is also observable in Turkeys.

Of the Stork. 3. That Storks are to be found, and will only live in Republicks or free States, is a petty conceit to advance the opinion of popular policies, and from Antipathies in nature, to disparage Monarchical Government. But how far agreeable unto truth, let them consider who read in *Pliny*, that among the *Thessalians* who were governed by Kings, and much abounded with Serpents, it was no less than capital to kill a Stork. That the Ancient *Egyptians* honoured them, whose Government was from all times Monarchical. That *Bellonius* affirmeth, Men make them nests in *France*. That relations make them common in *Persia*, and the dominions of the Great *Turk*. And lastly, how *Jeremy* the Prophet delivered himself unto his countrey-men, whose government was at that time Monarchical. *The Stork in the Heaven knoweth her appointed times, the Turtle, Crane and Swallow observe the time of their coming, but my people know not the judgment of the Lord.* Wherein to exprobrate their stupidity, he induceth the providence of Storks. Now if the bird had been unknown, the illustration had been obscure, and the exprobration not so proper.

Jer. 8. 7.

Of the Bittor. 4. That a Bittor maketh that mugient noise, or as we term it, Bumping, by putting its bill into a reed, as most believe, or as *Bellonius* and *Aldrovandus* conceive, by putting the same in water or mud, and after a while retaining the air by suddenly excluding it again, is not so easily made out. For my own part, though after diligent enquiry, I could never behold them in this motion; Notwithstanding by others whose observations we have expressly requested, we are informed, that some have beheld them making this noise on the shore, their bills being far enough removed from reed or water; that is, first strongly attracting the air, and unto a manifest distention of the neck, and presently after with great contention and violence excluding the same again. As for what others affirm of putting their bill in water or mud, it is also hard to make out. For what may be observed from any that walketh the Fens, there is little intermission, nor any observable pause, between the drawing in and sending forth of their breath. And the expiration or breathing forth doth not only produce a noise, but the inspiration or hailing in of the air, affordeth a sound that may be heard almost a flight-shot.

Now the reason of this strange and peculiar noise, is deduced from the conformation of the wind-pipe, which in this bird is different from other Volatiles. For at the upper extream it hath no fit *Larynx* or throttle to qualify the sound, and at the other end, by two branches deriveth it self into the lungs. Which division consisteth only of Semicircular fibres, and such as attain but half way round the part: By which formation they are dilatable into larger capacities, and are able to contain a fuller proportion of air; which being with violence sent up the weazon, and finding no resistance by the *Larynx*, it issueth forth in a sound like that from caverns, and such as sometimes subterraneous eruptions from hollow rocks afford. As *Aristotle* observeth in a Problem; and is observable in Pitchers, Bottles, and that instrument which *Aponensis* upon that problem describeth, wherewith in *Aristotle*'s time Gardiners affrighted birds.

Sect. 15.

Whether the large perforations of the extremities of the weazon, in the *abdomen*, admitting large quantity of air within the cavity of its membranes, as it doth in Frogs, may not much assist this mugiency or boation, may also be considered. For such as have beheld them making this noise out of the water, observe a large distention in their bodies; and their ordinary note is but like that of a Raven.

Of Whelps. 5. That Whelps are blind nine days, and then begin to see, is the common opinion of all, and some will be apt enough to descend unto oaths upon it. But this I find not answerable unto experience, for upon a strict observation

of

of many I have ſcarce found any that ſee the ninth day, few before the twelfth, and the eyes of ſome not open before the fourteenth day. And this is agreeable unto the determination of *Ariſtotle*, who computeth the time of their anopſie or non-viſion by that of their geſtation. For ſome, ſaith he, do go with their young the ſixth part of a year, two days over or under, that is, about ſixty days or nine weeks; and the Whelps of theſe ſee not till twelve days. Some go the fifth part of a year, that is, ſeventy one days, and theſe, ſaith he, ſee not before the fourteenth day. Others do go the fourth part of the year, that is, three whole months; and theſe, ſaith he, are without ſight no leſs than ſeventeen days. Wherein although the accounts be different, yet doth the leaſt thereof exceed the term of nine days, which is ſo generally received. And this compute of *Ariſtotle* doth generally overthrow the common cauſe alledged for this effect, that is, a precipitation or over-haſty excluſion before the birth be perfect, according unto the vulgar Adage, *Feſtinans canis cæcos parit catulos*: for herein the whelps of longeſt geſtation, are alſo the lateſt in viſion. The manner hereof is this. At the firſt littering, their eyes are faſtly cloſed, that is, by coalition or joyning together of the eye-lids, and ſo continue untill about the twelfth day; at which time they begin to ſeparate, and may be eaſily divelled or parted aſunder; they open at the inward *Canthus* or greater Angle of the eye, and ſo by degrees dilate themſelves quite open. An effect very ſtrange, and the cauſe of much obſcurity, wherein as yet mens enquiries are blind, and ſatisfaction not eaſily acquirable. What ever it be, thus much we may obſerve, Thoſe animals are only excluded without ſight, which are multiparous and multifidous, that is, which have many at a litter, and have alſo their feet divided into many portions. For the Swine, although multiparous, yet being biſulcous, and only cloven hooſed, is not excluded in this manner, but farrowed with open eyes, as other biſulcous animals.

6. The Antipathy between a Toad and a Spider, and that they poiſonouſly deſtroy each other, is very famous, and ſolemn ſtories have been written of their combats; wherein moſt commonly the victory is given unto the Spider. Of what Toads and Spiders it is to be underſtood would be conſidered. For the *Phalangium* and deadly Spiders, are different from thoſe we generally behold in *England*. However the verity hereof, as alſo of many others, we cannot but deſire; for hereby we might be ſurely provided of proper Antidotes in caſes which require them; But what we have obſerved herein, we cannot in reaſon conceal; who having in a Glaſs included a Toad with ſeveral Spiders, we beheld the Spiders without reſiſtance to ſit upon his head and paſs over all his body; which at laſt upon advantage he ſwallowed down, and that in few hours, unto the number of ſeven. And in the like manner will Toads alſo ſerve Bees, and are accounted enemies unto their Hives. Of a Toad and a Spider.

7. Whether a Lion be alſo afraid of a Cock, as is related by many, and believed by moſt, were very eaſie in ſome places to make trial. Although how far they ſtand in fear of that animal, we may ſufficiently underſtand, from what is delivered by *Camerarius*, whoſe words in his *Symbola* are theſe; *Noſtris temporibus in Aula ſereniſſimi Principis Bavariæ, unus ex Leonibus miris ſaltibus in vicinam cujuſdam domus aream ſeſe dimiſit, ubi Gallinaceorum cantum aut clamores nihil reformidans, ipſos unà cum pluribus gallinis devoravit.* That is, In our time in the Court of the Prince of *Bavaria*, one of the Lions leaped down into a Neighbours yard, where nothing regarding the crowing or noiſe of the Cocks, he eat them up with many other Hens. And therefore a very unſafe defenſative it is againſt the fury of this animal (and ſurely no better than Virginity of bloud Royal) which *Pliny* doth place in Cock-broth: For herewith, ſaith he, whoever is anointed (eſpecially if Garlick be boiled therein) no Lion or Panther will touch him. But of an higher nature it were, and more exalted Antipathy, if that were certain which *Proclus* delivers, that ſolary *Dæmons*, and ſuch as appear in the ſhape of Lions, will diſappear and vaniſh, if a Cock be preſented upon them. Of a Lion and a Cock. *De ſacrificiis & magia.*

8. It

8. It is generally conceived, an Ear-wig hath no Wings, and is reckoned amongſt impennous Inſects by many; but he that ſhall narrowly obſerve them, or ſhall with a needle put aſide the ſhort and ſheathy caſes on their back, may extend and draw forth two wings of a proportionable length for flight, and larger than in many Flies. The experiment of *Pennius* is yet more perfect, who with a Ruſh or Briſtle ſo pricked them as to make them flie.

Of Worms.

9. That Worms are exanguious Animals, and ſuch as have no bloud at all, is the determination of Philoſophy, the general opinion of Scholars, and I know not well how to diſſent from thence my ſelf. If ſo, ſurely we want a proper term whereby to expreſs that humour in them which ſo ſtrictly reſembleth bloud: and we refer it unto the diſcernment of others what to determine of that red and ſanguineous humor, found more plentifully about the Torquis or carneous Circle of great Worms in the Spring, affording in Linen or Paper an indiſcernable tincture from bloud. Or wherein that differeth from a vein, which in an apparent blue runneth along the body, and if dextrouſly pricked with a lancet, emitteth a red drop, which pricked on either ſide it will not readily afford.

In the upper parts of Worms, there are likewiſe found certain white and oval Glanduloſities, which Authors term Eggs, and in magnifying Glaſſes, they alſo repreſent them; how properly, may alſo be enquired; ſince if in them there be diſtinctions of Sexes, theſe Eggs are to be found in both. For in that which is preſumed to be their coition, that is, their uſual complication, or lateral adheſion above the ground, dividing ſuddenly with two Knives the adhering parts of both, I have found theſe Eggs in either.

10. That Flies, Bees, *&c.* do make that noiſe or humming ſound by their mouth, or as many believe with their wings only, would be more warily aſſerted, if we conſulted the determination of *Ariſtotle*, who as in ſundry other places, ſo more expreſly in his book of reſpiration, affirmeth this ſound to be made by the illiſion of an inward ſpirit upon a pellicle or little membrane about the precinct or pectoral diviſion of their body. If we alſo conſider that a Bee or Flie, ſo it be able to move the body, will buz, though its head be off; that it will do the like if deprived of wings, reſerving the head, whereby the body may be the better moved. And that ſome alſo which are big and lively will hum without either head or wing.

Nor is it only the beating upon this little membrane, by the inward and connatural ſpirit, as *Ariſtotle* determines, or the outward air, as *Scaliger* conceiveth, which affordeth this humming noiſe, but moſt of the other parts may alſo concur hereto; as will be manifeſt, if while they hum we lay our finger on the back or other parts; for thereupon will be felt a ſerrous or jarring motion like that which happeneth while we blow on the teeth of a comb through paper; and ſo if the head or other parts of the trunk be touched with oyl, the ſound will be much impaired, if not deſtroyed: for thoſe being alſo dry and membranous parts, by attrition of the ſpirit do help to advance the noiſe: And therefore alſo the ſound is ſtrongeſt in dry weather, and very weak in rainy ſeaſons, and toward winter; for then the air is moiſt, and the inward ſpirit growing weak, makes a languid and dumb alliſion upon the parts.

Of a Tainct.

11. There is found in the Summer a kind of Spider called a Tainct, of a red colour, and ſo little of body that ten of the largeſt will hardly outweigh a grain; this by Country people is accounted a deadly poiſon unto Cows and Horſes; who, if they ſuddenly die, and ſwell thereon, aſcribe their death hereto, and will commonly ſay, they have licked a Tainct. Now to ſatisfie the doubts of men, we have called this tradition unto experiment; we have given hereof unto Dogs, Chickens, Calves and Horſes, and not in the ſingular number; yet never could find the leaſt diſturbance enſue. There muſt be therefore other cauſes enquired of the ſudden death and ſwelling of cattle; and perhaps this Inſect is miſtaken, and unjuſtly accuſed for ſome other. For ſome there are which from elder times have been obſerved pernicious unto Cattle, as the *Bupreſtis* or Buriſtcow, the

the *Pityocampe* or *Eruca Pinuum*, by *Dioſcorides*, *Galen* and *Ætius*, the *Staphilinus* deſcribed by *Ariſtotle* and others, or thoſe red Phalangious Spiders like *Cantharides* mentioned by *Muffetus*. Now although the animal may be miſtaken and the opinion alſo falſe, yet in the ground and reaſon which makes Men moſt to doubt the verity hereof, there may be truth enough, that is, the inconſiderable quantity of this Inſect. For that a poiſon cannot deſtroy in ſo ſmall a bulk, we have no reaſon to affirm. For if, as *Leo Africanus* reporteth, the tenth part of a grain of the poiſon of *Nubia*, will diſpatch a Man in two hours; if the bite of a Viper and ſting of a Scorpion, is not conceived to impart ſo much; if the bite of an Aſp will kill within an hour, yet the impreſſion ſcarce viſible, and the Poiſon communicated not ponderable; we cannot as impoſſible reject this way of deſtruction; or deny the power of death in ſo narrow a circumſcription. *granum Nubiæ.*

12. Wondrous things are promiſed from the Glow-worm; from thence perpetual lights are pretended, and waters ſaid to be diſtilled which afford a luſtre in the night; and this is aſſerted by *Cardan*, *Albertus*, *Gaudentinus*, *Mizaldus* and many more. But hereto we cannot with reaſon aſſent: for the light made by this animal depends much upon its life. For when they are dead they ſhine not, nor alwaies while they live; but are obſcure or light, according to the protruſion of their luminous parts, as obſervation will inſtruct us. For this flammeous light is not over all the body, but only viſible on the inward ſide; in a ſmall white part near the tail. When this is full and ſeemeth protruded, there ariſeth a flame of a circular figure and Emerald green colour; which is diſcernable in any dark place in the day; but when it falleth and ſeemeth contracted, the light diſappeareth, and the colour of the part only remaineth. Now this light, as it appeareth and diſappeareth in their life, ſo doth it go quite out at their death. As we have obſerved in ſome, which preſerved in freſh graſs have lived and ſhined eighteen days; but as they declined, and the luminous humor dryed, their light grew languid, and at laſt went out with their Lives. Thus alſo the *Torpedo*, which alive hath a power to ſtupefie at a diſtance, hath none upon contraction being dead, as *Galen* and *Rondeletius* particularly experimented. And this hath alſo diſappointed the miſchief of thoſe intentions, which ſtudy the advancement of Poiſons; and fancy deſtructive compoſitions from Aſps or Vipers teeth, from Scorpions or Hornet ſtings. For theſe omit their efficacy in the death of the individual, and act but dependently on their forms. And thus far alſo thoſe Philoſophers concur with us, which held the Sun and Stars were living creatures, for they conceived their luſtre depended on their Lives; but if they ever died, their light muſt alſo periſh. Of the Glow-worm.

It were a notable piece of Art to tranſlate the light from the *Bononian* Stone into another Body; he that would attempt to make a ſhining Water from *Glow-worms*, muſt make trial when the ſplendent part is freſh and turgid. For even from the great *American Glow-worms*, and Flaming *Flies*, the light declineth as the luminous humor dryeth.

Now whether the light of animals, which do not occaſionally ſhine from contingent cauſes, be not of Kin unto the light of Heaven; whether the inviſible flame of life received in a convenient matter, may not become viſible, and the diffuſed æthereal light make little Stars by conglobation in idoneous parts of the *compoſitum*: whether alſo it may not have ſome original in the ſeed and ſpirit analogous unto the Element of Stars, whereof ſome glimpſe is obſervable on the little refulgent humor, at the firſt attempts of formation; Philoſophy may yet enquire.

True it is, that a Glow-worm will afford a faint light, almoſt a days ſpace, when many will conceive it dead; but this is a miſtake in the compute of death, and term of diſanimation; for indeed, it is not then dead, but if it be diſtended will ſlowly contract it ſelf again, which when it cannot do, it ceaſeth to ſhine any more. And to ſpeak ſtrictly, it is no eaſie matter to determine the point of death in Inſects and Creatures who have not their vitalities radically confined unto one part; for they are not dead when they ceaſe to move or afford the viſible evidences of life; as may be obſerved in

Flies, who when they appear even desperate and quite forsaken of their forms; by vertue of the Sun or warm ashes will be revoked unto life, and perform its functions again.

Now whether this lustre, a while remaining after death, dependeth not still upon the first impression, and light communicated or raised from an inward spirit, subsisting a while in a moist and apt recipient, nor long continuing in this, or the more remarkable *Indian* Glow-worm; or whether it be of another Nature, and proceedeth from different causes of illumination; yet since it confessedly subsisteth so little a while after their lives, how to make perpetual lights, and sublunary Moons thereof as is pretended, we rationally doubt, though not so sharply deny, with *Scaliger* and *Muffetus*.

13. The wisdom of the Pismire is magnified by all, and in the Panegyricks of their providence we alwaies meet with this, That to prevent the growth of Corn which they store up, they bite off the end thereof: And some have conceived that from hence they have their name in † Hebrew: From whence ariseth a conceit that Corn will not grow if the extreams be cut or broken. But herein we find no security to prevent its germination; as having made trial in grains, whose ends cut off have notwithstanding suddenly sprouted, and according to the Law of their kinds; that is, the roots of Barley and Oats at contrary ends, of Wheat and Rye at the same. And therefore some have delivered that after rainy weather they dry these grains in the Sun; which if effectual, we must conceive to be made in a high degree and above the progression of Malt; for that Malt will grow, this year hath informed us, and that unto a perfect ear.

† *Nemalah à Namal circumcidit.*

A natural vicissitude of generation in Homogeneous things.

And if that be true which is delivered by many, and we shall further experiment, that a decoction of Toad-stools if poured upon earth, will produce the same again: If Sow-thistles will abound in places manured with dung of Hogs, which feed much upon that plant: If Horse-dung reproduceth Oats; If winds and rains will transport the seminals of Plants; it will not be easie to determine where the power of generation ceaseth. The forms of things may lie deeper than we conceive them: seminal principles may not be dead in the divided atoms of Plants; but wandering in the Ocean of nature, when they hit upon proportionable materials, may unite, and return to their visible selves again.

But the prudence of this animal is by gnawing, piercing, or otherwise, to destroy the little nebbe or principle of germination. Which notwithstanding is not easily discoverable; it being no ready business to meet with such grains in Ant-hils; and he must dig deep, that will seek them in the Winter.

CHAP. XXVIII.

Of some others.

Of the Chicken.

THat a Chicken is formed out of the yelk of the Egg, was the opinion of some Ancient Philosophers. Whether it be not the nutriment of the Pullet may also be considered: Since umbilical vessels are carried unto it: Since much of the yelk remaineth after the Chickens is formed: Since in a Chicken newly hatched, the stomach is tinged yellow, and the belly full of yelk, which is drawn in at the navel or vessels towards the vent, as may be discerned in Chickens within a day or two before exclusion.

Whether the Chicken be made out of the white, or that be not also its aliment, is likewise very questionable: Since an umbilical vessel is derived unto it: Since after the formation and perfect shape of the Chicken, much of the white remaineth.

Whether it be not made out of the *grando*, gallature, germ or tred of the Egg, as *Aquapendente* informeth us, seemeth to many of doubt: for at the blunter end it is not discovered after the Chicken is formed; by this also the yelk and white are continued, whereby it may conveniently receive its nutriment from them both.

Now that from such slender materials, Nature should effect this production,

on, it is no more than is obſerved in other animals; and even in grains and kernels, the greateſt part is but the nutriment of that generative particle, ſo diſproportionable unto it.

Of Eggs. A greater difficulty in the doctrine of Eggs, is, how the ſperm of the Cock prolificates and makes the oval conception fruitful, or how it attaineth unto every Egg, ſince the vitellary or place of the yelk is very high: Since the ovary or part where the white involveth it, is in the ſecond region of the matrix, which is ſomewhat long and inverted: Since alſo a Cock will in one day fertilate the whole racemation or cluſter of Eggs, which are not excluded in many weeks after.

But theſe at laſt, and how in the *Cicatricula* or little pale circle formation firſt beginneth, how the *Grando* or tredle are but the poles and eſtabliſhing particles of the tender membranes, firmly conſerving the floating parts, in their proper places, with many other obſervables, that ocular Philoſopher, and ſingular diſcloſer of truth, Dr. *Harvey* hath diſcovered, in that excellent diſcourſe of Generation; So ſtrongly erected upon the two great pillars of truth, Experience and ſolid Reaſon.

That the Sex is diſcernable from the figure of Eggs, or that Cocks or Hens proceed from long or round ones, as many contend, experiment will eaſily fruſtrate.

The *Ægyptians* obſerved a better way to hatch their Eggs in Ovens, than the *Babylonians* to roaſt them at the bottom of a ſling, by ſwinging them round about, till heat from motion had concocted them; for that confuſeth all parts without any ſuch effect.

Though ſlight diſtinction be made between boiled and roaſted Eggs, yet is there no ſlender difference, for the one is much drier than the other: the Egg expiring leſs in the elixation or boiling; whereas in the aſſation or roaſting, it will ſometimes abate a drachm; that is, threeſcore grains in weight. So a new laid Egg will not ſo eaſily be boiled hard, becauſe it contains a greater ſtock of humid parts; which muſt be evaporated; before the heat can bring the inexhalable parts into conſiſtence.

Why the Hen hatcheth not the Egg in her belly, or maketh not at leaſt ſome rudiment thereof within her ſelf, by the natural heat of inward parts, ſince the ſame is performed by incubation from an outward warmth after? Why the Egg is thinner at one extream? Why there is ſome cavity or emptineſs at the blunter end? Why we open them at that part? Why the greater end is firſt excluded? Why ſome Eggs are all red, as the Keſtrils; ſome only red at one end, as thoſe of Kites and Buzzards? why ſome Eggs are not Oval but Round, as thoſe of fiſhes? *&c.* are problems, whoſe deciſions would too much enlarge this diſcourſe.

Of Snakes, *&c.* That Snakes and Vipers do ſting or tranſmit their miſchief by the tail, is a common expreſſion not eaſily to be juſtified; and a determination of their venoms unto a part, wherein we could never find it; the poiſon lying about the teeth, and communicated by bite, in ſuch as are deſtructive. And therefore when biting Serpents are mentioned in the Scripture, they are not differentially ſet down from ſuch as miſchief by ſtings; nor can concluſions be made conformable to this opinion, becauſe when the Rod of *Moſes* was turned into a Serpent, God determinatively commanded him to take up the ſame by the tail.

Nor are all Snakes of ſuch empoiſoning qualities, as common opinion preſumeth; as is confirmable from the ordinary green Snake with us, from ſeveral Hiſtories of domeſtick Snakes, from Ophiophagous Nations, and ſuch as feed upon Serpents.

Surely the deſtructive deluſion of Satan in this ſhape, hath much enlarged the opinion of their miſchief. Which notwithſtanding was not ſo high with the Heathens, in whom the Devil had wrought a better opinion of this animal, it being ſacred unto the *Egyptians*, *Greeks* and *Romans*, and the common ſymbol of ſanity. In the ſhape whereof *Æſculapius* the God of Health appeared unto the *Romans*, accompanied their Embaſſadors to *Rome* from *Epidaurus*; and the ſame did ſtand in the *Tiberine* Iſle upon the Temple of *Æſculapius*.

Some doubt many have of the *Tarantula*, or poiſonous Spider of *Calabria*, and that magical cure of the bite thereof by Muſick. But ſince we obſerve that many atteſt it from experience: Since the learned *Kirckerus* hath poſitively averred it, and ſet down the ſongs and tunes ſolemnly uſed for it; Since ſome alſo affirm the *Tarantula* it ſelf will dance upon certain ſtroaks, whereby they ſet their Inſtruments againſt its poiſon; we ſhall not at all queſtion it.

Much wonder is made of the *Boranez*, that ſtrange plant-animal or vegetable Lamb of *Tartary*, which Wolves delight to feed on, which hath the ſhape of a Lamb, affordeth a bloody juyce upon breaking, and liveth while the plants be conſumed about it. And yet if all this be no more, than the ſhape of a Lamb in the flower or ſeed, upon the top of the ſtalk, as we meet with the forms of Bees, Flies and Dogs in ſome others; he hath ſeen nothing that ſhall much wonder at it.

It may ſeem too hard to queſtion the ſwiftneſs of Tigers, which hath therefore given names unto Horſes, Ships and Rivers, nor can we deny what all have thus affirmed; yet cannot but obſerve, that *Jacobus Bontius* late Phyſician at *Java* in the Eaſt *Indies*, as an ocular and frequent witneſs, is not afraid to deny it; to condemn *Pliny* who affirmeth it; and that indeed it is but a ſlow and tardigradous animal, preying upon advantage, and otherwiſe may be eſcaped.

Many more there are whoſe ſerious enquiries we muſt requeſt of others, and ſhall only awake conſiderations, Whether that common opinion that Snakes do breed out of the back or ſpinal marrow of Man, doth build upon any conſtant root or ſeed in nature; or did not ariſe from contingent generation, in ſome ſingle bodies remembred by *Pliny* or others, and might be paralleld ſince in living corruptions of the guts and other parts; which regularly proceed not to putrefactions of that nature.

Whether the Story of the *Remora* be not unreaſonably amplified; whether that of Bernacles and Gooſe-trees be not too much enlarged; whether the common hiſtory of Bees will hold, as large accounts have delivered; whether the brains of Cats be attended with ſuch deſtructive malignities, as *Dioſcorides* and others put upon them?

As alſo whether there be not ſome additional help of Art, unto the Numiſmatical and Muſical ſhells, which we ſometimes meet with in conchylious collections among us?

Whether the faſting ſpittle of man be poiſon unto Snakes and Vipers, as experience hath made us doubt? Whether the Nightingals ſitting with her breaſt againſt a thorn, be any more than that ſhe placeth ſome prickles on the outſide of her neſt, or rooſteth in thorny prickly places, where Serpents may leaſt approach her? Whether Mice may be bred by putrefaction as well as univocall production, as may be eaſily believed, if that receipt to make Mice out of Wheat will hold, which *Helmont* hath delivered. Whether Quails from any idioſyncracy or peculiarity of conſtitution, do innocuouſly feed upon Hellebore, or rather ſometime but medically uſe the ſame; becauſe we perceive that Stares, which are commonly ſaid harmleſly to feed on Hemlock, do not make good the tradition; and he that obſerves what Vertigoes, Cramps and Convulſions follow thereon in theſe animals, will be of our belief.

Helm. Imago fermenti, &c.

THE

THE FOURTH BOOK.

Of many popular and received Tenets concerning Man, which examined, prove either false or dubious.

CHAP. I.

Of the Erectneſs of Man

THat only *Man* hath an Erect figure, and for to behold and look up toward Heaven, according to that of the Poet,

Pronaque cùm ſpectant animalia cætera terram,
Os homini ſublime dedit, cœlumque tueri
Juſſit, & erectos ad ſydera tollere vultus.

is a double aſſertion, whoſe firſt part may be true; if we take Erectneſs ſtrictly, and ſo as *Galen* hath defined it; for they only, ſaith he, have an Erect figure, whoſe ſpine and thigh-bone are carried in right lines; and ſo indeed of any we yet know, *Man* only is Erect. For the thighs of other animals do ſtand at Angles with their ſpine, and have rectangular poſitions in Birds, and perfect Quadrupeds. Nor doth the Frog, though ſtretched out, or ſwimming, attain the rectitude of *Man*, or carry its thigh without all angularity. And thus is it alſo true, that Man only ſitteth, if we define ſitting to be a firmation of the body upon the *Iſchias*: wherein if the poſition be juſt and natural, the Thigh-bone lieth at right angles to the Spine, and the Leg-bone or *Tibia* to the Thigh. For others when they ſeem to ſit, as *Dogs*, *Cats*, or *Lions*, do make unto their Spine acute angles with their Thigh, and acute to the Thigh with their Shank. Thus is it likewiſe

What figure in animals is properly erect.

What ſciante or ſitting.

ἐξονειρωκλιτικός.

wise true, what *Aristotle* alledgeth in that Problem; why *Man* alone sufferreth pollutions in the night, because *Man* only lieth upon his Back; if we define not the same by every supine position, but when the Spine is in rectitude with the Thigh, and both with the arms lie parallel to the *Horizon*: so that a line through their Navel will pass through the Zenith and Centre of the Earth. And so cannot other animals lie upon their Backs; for though the Spine lie parallel with the *Horizon*, yet will their Legs incline, and lie at angles unto it. And upon these three divers positions in *Man*, wherein the Spine can only be at right lines with the Thigh, arise those remarkable postures, prone, supine and erect; which are but differenced in situation, or angular postures upon the Back, the Belly and the Feet.

But if Erectness be popularly taken, and as it is largely opposed unto proneness, or the posture of animals looking downwards, carrying their venters or opposite part to the Spine, directly towards the Earth, it may admit of question. For though in *Serpents* and *Lizards* we may truly allow a proneness; yet *Galen* acknowledgeth that perfect Quadrupeds, as *Horses*, *Oxen* and *Camels*, are but partly prone, and have some part of Erectness. And *Birds*, or flying Animals, are so far from this kind of proneness, that they are almost erect; advancing the Head and Breast in their progression, and only prone in the Act of volitation or flying. And if that be true which is delivered of the *Pengin* or *Anser Magellanicus*, often described in Maps about those *Straits*, that they go erect like *Men*, and with their Breast and Belly do make one line perpendicular unto the *axis* of the Earth; it will almost make up the exact Erectness of *Man*. Not will that Insect come very short which we have often beheld, that is, one kind of Locust which stands not prone, or a little inclining upward, but in a large Erectness, elevating alwaies the two fore-Legs, and sustaining it self in the middle of the other four: by *Zoographers* called *Mantis*, and by the common People of *Provence*, *Prega*, *Dio*, the Prophet and praying Locust; as being generally found in the posture of supplication, or such as resembleth ours, when we lift up our hands to Heaven.

Observe also the *Urias Bellonii* and *Mergus major*.

Describers of Animals.

As for the end of this Erection; to look up toward Heaven; though confirmed by several testimonies, and the *Greek* Etymology of *Man*, it is not so readily to be admitted; and as a popular and vain conceit was anciently rejected by *Galen*; who in his third, *De usu partium*, determines, that *Man* is erect, because he was made with hands, and was therewith to exercise all Arts, which in any other figure he could not have performed; as he excellently declareth in that place, where he also proves that *Man* could have been made neither Quadruped nor Centaur.

And for the accomplishment of that intention, that is, to look up and behold the Heavens, *Man* hath a notable disadvantage in the Eye-lid; whereof the upper is far greater than the lower, which abridgeth the sight upwards contrary to those of *Birds*, who herein have the advantage of *Man*: Insomuch that the learned *Plempius* † is bold to affirm, that if he had had the formation of the Eye-lids, he would have contrived them quite otherwise.

Plemp. Ophthalmographia.

The ground and occasion of that conceit was a literal apprehension of a figurative expression in *Plato*; as *Galen* thus delivers; To opinion that *Man* is erect to look up and behold Heavens, is a conceit only fit for those that never saw the *Fish* Uranoscopus, that is, the Beholder of Heaven; which hath its Eyes so placed, that it looks up directly to Heaven; which *Man* doth not, except he recline, or bend his Head backward: and thus to look up to Heaven, agreeeth not only unto *Men*, but *Asses*; to omit *Birds* with long necks, which look not only upward, but round about at pleasure. And therefore Men of this opinion understood not *Plato* when he said, that *Man* doth *Sursum aspicere*;

aſpicere; for thereby was not meant to gape, or look upward with the Eye; but to have his thoughts ſublime; and not only to behold, but ſpeculate their Nature with the Eye of the Underſtanding.

Now although *Galen* in this place makes inſtance but in one, yet are there other Fiſhes, whoſe Eyes regard the Heavens, as Plane and Cartilagineous *Fiſhes*; as *Pectinals*, or ſuch as have their bones made laterally like a Comb; for when they apply themſelves to ſleep or reſt upon the white ſide, their Eyes on the other ſide look upward toward Heaven. For *Birds*, they generally carry their heads erected like *Man*, and have advantage in their upper Eye-lid; and many that have long Necks, and bear their Heads ſomewhat backward, behold far more of the Heavens, and ſeem to look above the Æquinoctial Circle. And ſo alſo in many Quadrupeds, although their progreſſion be partly prone, yet is the ſight of their Eye direct, not reſpecting the Earth but Heaven; and makes an higher Arch of altitude than our own. The Poſition of a *Frog* with his head above Water exceedeth theſe: for therein he ſeems to behold a large part of the Heavens, and the *acies* of his Eye to aſcend as high as the Tropick; but he that hath beheld the poſture of a *Bittor*, will not deny that it beholds almoſt the very * *Zenith*.

* Point of Heaven over our heads.

CHAP. II.

Of the Heart.

THat the *Heart* of Man is ſeated in the left ſide, is an aſſeveration, which ſtrictly taken, is refutable by inſpection, whereby it appears the Baſe and Centre thereof is in the midſt of the Cheſt; true it is, that the *Mucro* or Point thereof inclineth unto the left; for by this poſition it giveth way unto the aſcenſion of the Midriff, and by reaſon of the hollow vein could not commodiouſly deflect unto the right. From which diverſion, nevertheleſs, we cannot ſo properly ſay 'tis placed in the left, as that it conſiſteth in the middle, that is, where its Centre riſeth; for ſo do we uſually ſay a *Gnomon* or Needle is in the middle of a Dial, although the extreams may reſpect the North or South, and approach the Circumference thereof.

How a Mans heart is placed in his Body.

The ground of this miſtake, is a general obſervation from the pulſe or motion of the *Heart*, which is more ſenſible on this ſide; but the reaſon hereof is not to be drawn from the ſituation of the *Heart*, but the ſite of the left Ventricle wherein the vital Spirits are laboured; and alſo the great Artery that conveyeth them out; both which are ſituated on the left. Upon this reaſon Epithems or cordial Applications are juſtly applyed unto the left Breaſt; and the Wounds under the fifth Rib may be more ſuddenly deſtructive, if made on the ſiniſter ſide, and the Spear of the Souldier that pierced our Saviour, is not improperly deſcribed, when Painters direct it a little towards the left.

The other ground is more particular and upon inſpection; for in dead Bodies, eſpecially lying upon the Spine, the *Heart* doth ſeem to incline unto the left. Which happeneth not from its proper ſite; but beſides its ſiniſtrous gravity, is drawn that way by the great Artery, which then ſubſideth and haleth the heart unto it. And therefore ſtrictly taken, the *Heart* is ſeated in the middle of the Cheſt; but after a careleſs and inconſiderate aſpection, or according to the readieſt ſenſe of pulſation, we ſhall not quarrel, if any affirm it is ſeated toward the left. And in theſe conſiderations muſt *Ariſtotle* be ſalved, when he affirmeth the *Heart* of Man is placed in the left ſide, and thus in a popular acception

—Levâ in parte mamillæ.

ption may we receive the Periphrasis of *Persius*; when he taketh the part under the left Pap for the *Heart*; and if rightly apprehended, it concerneth not this controversie, when it is said in *Ecclesiastes*; The *Heart* of a wise Man is in the right side, but that of a Fool in the left; for thereby may be implyed, that the *Heart* of a wise Man delighteth in the right way, or in the path of Vertue; that of a Fool in the left, or road of Vice; according to the Mysterie of the Letter of *Pythagoras*, or that expression in *Jonah*, concerning sixscore thousand, that could not discern between their right hand and their left, or knew not good from evil.

That assertion also, that Man proportionally hath the largest brain, I did I confess somewhat doubt; and conceived it might have failed in Birds, especially such as having little Bodies, have yet large Cranies, and seem to contain much Brain, as *Snipes*, *Woodcocks*, &c. But upon tryal I find it very true. The Brains of a Man, *Archangelus* and *Bauhinus* observe, to weigh four pound, and sometime five and a half. If therefore a Man weigh one hundred and forty pounds, and his Brain but five, his Weight is twenty seven times as much as his Brain, deducting the weight of that five pound which is allowed for it. Now in a Snipe, which weighed four ounces two drachms, I find the Brains to weigh but half a drachm; so that the weight of the Body (allowing for the Brain) exceeded the weight of the Brain, sixty seven times and an half.

More controvertible it seemeth in the Brains of Sparrows, whose Cranies are rounder, and so of larger capacity: and most of all in the Heads of Birds, upon the first formation in the Egg, wherein the Head seems larger than all the Body, and the very Eyes almost as big as either. A Sparrow in the total we found to weigh seven drachms and four and twenty grains; whereof the Head a drachm, but the Brain not fifteen grains; which answereth not fully the proportion of the Brain of Man. And therefore it is to be taken of the whole Head with the Brains, when *Scaliger* objecteth that the Head of a Man is the fifteenth part of his Body; that of a Sparrow scarce the fifth.

Histor. Animal. lib. 1.

CHAP. III.

Of Pleurisies.

THat *Pleurisies* are only on the left side, is a popular Tenet not only absurd, but dangerous. From the misapprehension hereof, men omitting the opportunity of remedies, which otherwise they would not neglect. Chiefly occasioned by the Ignorance of *Anatomy*, and the extent of the part affected; which in an exquisite *Pleurisie* is determined to be the Skin or Membrane which investeth the Ribs, for so it is defined, *Inflammatio membranæ costas succingentis*; An Inflammation, either simple, consisting only of an hot and sanguineous affluxion; or else denominable from other humours, according to the predominancy of Melancholy, Flegm, or Choler. The Membrane thus inflamed, is properly called *Pleura*; from whence the Disease hath its name: and this investeth not only one side, but over-spreadeth the cavity of the Chest, and affordeth a common coat unto the parts contained therein.

What a Pleurisie is.

Now therefore the *Pleura* being common unto both sides, it is not reasonable to confine the inflammation unto one; nor strictly to determine it is always in the side; but sometimes before and behind, that is, inclining to the Spine or Breast bone; for thither this Coat extendeth; and therefore with equal propriety we may affirm, that Ulcers of the

the Lungs, or Apoſtems of the brain do happen only in the left ſide; or that Ruptures are confinable unto one ſide, whereas the *Peritonæum* or Rim of the Belly may be broke, or its perforations relaxed in either.

CHAP. IV.

Of the Ring-finger.

AN opinion there is, which magnifies the fourth *Finger* of the left Hand; preſuming therein a cordial relation, that a particular veſſel, nerve, vein or artery is conferred thereto from the heart, and therefore that eſpecially hath the honour to bear our Rings. Which was not only the Chriſtian practice in Nuptial contracts, but obſerved by Heathens, as *Alexander ab Alexandro*, *Gellius*, *Macrobius* and *Pierius* have delivered, as *Levinus Lemnius* hath confirmed, who affirms this peculiar veſſel to be an Artery, and not a Nerve, as Antiquity hath conceived it; adding moreover that *Rings* hereon peculiarly affect the Heart; that in Lipothymies or ſwoundings he uſed the frication of this *Finger* with Saffron and Gold: that the ancient Phyſicians mixed up their Medicines herewith; that this is ſeldom or laſt of all affected with the Gout, and when that becometh nodous, Men continue not long after. Notwithſtanding all which we remain unſatisfied, nor can we think, the reaſons alledged ſufficiently eſtabliſh the preheminency of this *Finger*.

For firſt, Concerning the practice of Antiquity, the cuſtom was not general to wear their *Rings* either on this hand or *Finger*; for it is ſaid, and that emphatically in *Jeremiah*, *Si fuerit Jeconias filius Joachim regis Judæ annulus in manu dextrâ meâ, inde evellam eum*: Though *Coniah* the ſon of *Joachim* King of *Judah*, were the ſignet on my right Hand, yet would I pluck thee thence. So is it obſerved by *Pliny*, that in the portraits of their Gods, the *Rings* were worn on the *Finger* next the *Thumb*; that the *Romans* wore them alſo upon their little *Finger*, as *Nero* is deſcribed in *Petronius*: ſome wore them on the middle *Finger*, as the ancient *Gaules* and *Britans*; and ſome upon the fore-*Finger*, as is deducible from *Julius Pollux*, who names that *Ring*, *Corionos*.

Again, That the practice of the Ancients had any ſuch reſpect of cordiality or reference unto the Heart, will much be doubted, if we conſider their Rings were made of Iron; ſuch was that of *Prometheus*, who is conceived the firſt that brought them in uſe. So, as *Pliny* affirmeth, for many years the *Senators* of *Rome* did not wear any Rings of Gold; but the ſlaves wore generally Iron Rings until their manumiſſion or preferment to ſome dignity. That the *Lacedemonians* continued their Iron Rings unto his daies, *Pliny* alſo delivereth, and ſurely they uſed few of Gold; for beſide that *Lycurgus* prohibited that metal, we read in *Athenæus*, that having a deſire to gild the face of *Apollo*, they enquired of the Oracle where they might purchaſe ſo much Gold; and were directed unto *Cræſus* King of *Lydia*.

Rings anciently of Iron.

Moreover whether the Antients had any ſuch intention, the grounds which they conceived in Vein, Nerve or Artery, are not to be juſtified, nor will inſpection confirm a peculiar veſſel in this Finger. For as *Anatomy* informeth, the *Baſilica* vein dividing into two branches below the cubit, the outward ſendeth two ſurcles unto the thumb, two unto the fore-finger, and one unto the middle finger in the inward ſide; the other branch of the *Baſilica* ſendeth one ſurcle unto the outſide of the middle finger, two unto the Ring, and as many unto the little fingers; ſo that they all

proceed from the *Baſilica*, and are in equal numbers derived unto every one. In the ſame manner are the branches of the axillary Artery diſtributed into the Hand; for below the cubit it divideth into two parts, the one running along the *Radius*, and paſſing by the wreſt or place of the pulſe, is at the *Fingers* ſubdivided into three Branches; whereof the firſt conveyeth two ſurcles unto the *Thumb*, the ſecond as many to the fore-*Finger*, and the third one unto the middle *Finger*, and the other or lower diviſion of the Artery deſcendeth by the *Ulna*, and furniſheth the other *Fingers*; that is the middle with one ſurcle, and the *Ring* and little *Fingers* with two. As for the Nerves, they are diſpoſed much after the ſame manner, and have their original from the Brain, and not the Heart, as many of the Ancients conceived; which is ſo far from affording Nerves unto other parts, that it receiveth very few it ſelf from the ſixth conjugation, or pair of Nerves in the Brain.

Whence the Nerves proceed.

Laſtly, Theſe propagations being communicated unto both Hands, we have no greater reaſon to wear our *Rings* on the left, than on the right; nor are there cordial conſiderations in the one, more than the other. And therefore when *Foreſtus* for the ſtanching of blood makes uſe of Medical applications unto the fourth *Finger*, he confines not that practice unto the left, but varieth the ſide according to the noſtril bleeding. So in Feavers, where the Heart primarily ſuffereth, we apply Medicines unto the wreſts of either arm; ſo we touch the pulſe of both, and judge of the affections of the Heart by the one as well as the other. And although in diſpoſitions of Liver or Spleen, conſiderations are made in *Phlebotomy* reſpectively to their ſituation; yet when the Heart is affected, Men have thought it as effectual to bleed on the right as the left; and although alſo it may be thought, a nearer reſpect is to be had of the left, becauſe the great Artery proceeds from the left ventricle, and ſo is nearer that arm; it admits not that conſideration. For under the channel-bones the Artery divideth into two great branches, from which trunk or point of diviſion, the diſtance unto either Hand is equal, and the conſideration alſo anſwerable.

All which with many reſpective Niceties, in order unto parts, ſides, and veins, are now become of leſs conſideration, by the new and noble doctrine of the Circulation of the Blood.

And therefore *Macrobius* diſcuſſing the point, hath alledged another reaſon; affirming that the geſtation of *Rings* upon this Hand and *Finger*, might rather be uſed for their conveniency and preſervation, than any cordial relation. For at firſt (ſaith he) is was both free and uſual to wear *Rings* on either Hand; but after that luxury encreaſed, when pretious gems and rich inſculptures were added, the cuſtom of wearing them on the right Hand was tranſlated unto the left; for that Hand being leſs imployed, thereby they were beſt preſerved. And for the ſame reaſon they placed them on this *Finger*; for the *Thumb* was too active a *Finger*, and is commonly imployed with either of the reſt: the Index or fore-*Finger* was too naked whereto to commit their pretioſities, and hath the tuition of the *Thumb* ſcarce unto the ſecond joint: the middle and little *Finger* they rejected as extreams, and too big or too little for their *Rings*, and of all choſe out the fourth, as being leaſt uſed of any, as being guarded on either ſide, and having in moſt this peculiar condition, that it cannot be extended alone and by it ſelf, but will be accompanied by ſome *Finger* on either ſide. And to this opinion aſſenteth *Alexander ab Alexandro*, *Annulum nuptialem prior ætas in ſiniſtrâ ferebat, crediderim nè attereretur.*

Now that which begat or promoted the common opinion, was the common conceit that the Heart was ſeated on the left ſide; but how far this is verified, we have before declared. The *Egyptian* practice hath much advanced the ſame, who unto this *Finger* derived a Nerve from the Heart; and therefore the Prieſt anointed the ſame with precious oyls before the Altar. But how weak *Anatomiſts* they were, which were ſo good

Em. almers,

Embalmers, we have already ſhewed. And though this reaſon took moſt place, yet had they another which more commended that practice: and that was the number whereof this *Finger* was an Hieroglyphick. For by holding down the fourth *Finger* of the left Hand, while the reſt were extended, they ſignified the perfect and magnified number of ſix. For as *Pierius* hath graphically declared, Antiquity expreſſed numbers by the *Fingers* of either Hand: on the left they accounted their digits and articulate numbers unto an hundred; on the right Hand hundreds and thouſands; the depreſſing this *Finger*, which in the left Hand implied but ſix, in the right indigitated ſix hundred. In this way of numeration, may we conſtrue that of *Juvenal* concerning *Neſtor*,

—— Qui ter tot ſæcula mortem
Diſtulit, atque ſuos jam dextrâ computat annos.

And however it were intended, in this ſenſe it will be very elegant what is delivered of Wiſdom, *Prov.* 3. *Length of days is in her right hand, and in her left hand riches and honour.*

As for the obſervation of *Lemnius* an eminent Phyſician, concerning the Gout; however it happened in his Country, we may obſerve it otherwiſe in ours; that is, that * chiragrical perſons do ſuffer in this *Finger* as well as in the reſt, and ſometimes firſt of all, and ſometimes no where elſe. And for the mixing up medicines herewith; it is rather an argument of opinion, than any conſiderable effect; and we as highly conceive of the practice in *Diapalma*; that is, in the making of that Plaſter, to ſtir it with the ſtick of a Palm.

* Hand-Gouty perſons.

CHAP. V.

Of the right and left Hand.

IT is alſo ſuſpicious, and not with that certainty to be received, what is generally believed concerning the right and left Hand; that Men naturally make uſe of the right, and that the uſe of the other is a digreſſion or aberration from that way which nature generally intendeth. We do not deny that almoſt all Nations have uſed this hand, and aſcribed a preheminence thereto: hereof a remarkable paſſage there is in the 48th of *Geneſis*, *And Joſeph took them both, Ephraim in his right hand towards Iſraels left hand, and Manaſſes in his left hand towards Iſraels right hand, and Iſrael ſtretched out his right hand and laid it upon Ephraims head, who was the younger, and his left hand upon Manaſſes head, guiding his hands wittingly, for Manaſſes was the firſt-born; and when Joſeph ſaw that his father laid his right hand upon the head of Ephraim, it diſpleaſed him, and he held up his fathers hand to remove it from Ephraims head unto Manaſſes head; and Joſeph ſaid, Not ſo my father, for this is the firſt-born, put thy right hand upon his head.* The like appeareth from the ordinance of *Moſes* in the Conſecration of their Prieſts, *Then ſhalt thou kill the Ram, and take of his blood, and put it upon the tip of the right ear of Aaron, and upon the tip of the right ear of his ſons, and upon the thumb of the right hand, and upon the great toe of the right foot, and ſprinkle the blood on the Altar round about.* That the *Perſians* were wont herewith to plight their Faith, is teſtified by *Diodorus*: That the *Greeks* and *Romans* made uſe hereof, beſide the teſtimony of divers Authors, is evident from their cuſtom of diſcumbency at their meals, which was upon their left ſide, for ſo their right hand was free, and ready for all ſervice. As alſo from the conjunction of the right hands and not the left, obſervable in the *Roman* Medals of Concord. Nor was

this only in uſe with divers Nations of Men, but was the cuſtom of whole Nations of Women; as is deducible from the *Amazons* in the amputation of their right Breaſt, whereby they had the freer uſe of their Bow. All which do ſeem to declare a natural preferment of the one unto motion before the other; wherein notwithſtanding in ſubmiſſion to future information, we are unſatisfied unto great dubitation.

For Firſt, If there were a determinate prepotency in the right, and ſuch as ariſeth from a conſtant root in nature, we might expect the ſame in other Animals, whoſe parts are alſo differenced by dextrality; wherein notwithſtanding we cannot diſcover a diſtinct and complying account; for we find not that *Horſes*, *Bulls*, or *Mules*, are generally ſtronger on this ſide. As for Animals whoſe fore-legs more ſenſibly ſupply the uſe of arms, they hold, if not an equality in both, a prevalency oft-times in the other, as *Squirrels*, *Apes*, and *Monkies*; the ſame is alſo diſcernible in *Parrots*, who feed themſelves more commonly by the left-leg, and Men obſerve that the Eye of a Tumbler is biggeſt, not conſtantly in one, but in the bearing ſide.

That there is alſo in Men a natural prepotency in the right, we cannot with conſtancy affirm, if we make obſervation in Children; who, permitted the freedom of both, do oft-times confine unto the left, and are not without great difficulty reſtrained from it. And therefore this prevalency is either uncertainly placed in the laterality, or cuſtom determines its indifferency. Which is the reſolution of *Ariſtotle* in that Problem, which enquires why the right-ſide being better than the left, is equal in the ſenſes? becauſe, ſaith he, the right and left do differ by uſe and cuſtom, which have no place in the Senſes. For right and left as parts inſervient unto the motive faculty, are differenced by degrees from uſe and aſſueſaction, according whereto the one grows ſtronger and oft-times bigger than the other. But in the Senſes it is otherwiſe; for they acquire not their perfection by uſe or cuſtom, but at the firſt we equally hear, and ſee with one Eye, as well as with another. And therefore, were this indifferency permitted, or did not conſtitution, but nature determine dextrality, there would be many more *Scevola's* than are delivered in Story; nor needed we to draw examples of the left, from the ſons of the right hand; as we read of ſeven thouſand in the Army of the *Benjamites*. True it is, that although there be an indifferency in either, or a prevalency indifferent in one, yet is it moſt reaſonable for uniformity, and ſundry reſpective uſes, that Men ſhould apply themſelves to the conſtant uſe of one; for there will otherwiſe ariſe anomalous diſturbances in manual actions, not only in civil and artificial, but alſo in Military affairs, and the ſeveral actions of War.

Whence the dextral activity in Men proceeds.

Benjamin filius dextræ.

Secondly, The grounds and reaſons alledged for the right, are not ſatisfactory, and afford no reſt in their deciſion. *Scaliger* finding a defect in the reaſon of *Ariſtotle*, introduceth one of no leſs deficiency himſelf; *Ratio materialis* (ſaith he) *ſanguinis craſſitudo ſimul & multitudo*; that is, the reaſon of the vigour of this ſide, is the craſſitude and plenty of blood; but this is not ſufficient; for the craſſitude or thickneſs of blood affordeth no reaſon why one Arm ſhould be enabled before the other, and the plenty thereof, why both not enabled equally. *Fallopius* is of another conceit, deducing the reaſon from the *Azygos* or *vena ſine pari*, a large and conſiderable Vein ariſing out of the *cava* or hollow Vein, before it enters the right Ventricle of the Heart, and placed only in the right ſide. But neither is this perſuaſory; for the *Azygos* communicates no branches unto the Arms or Legs on either ſide, but diſperſeth into the Ribs on both, and in its deſcent doth furniſh the left Emulgent with one Vein, and the firſt Vein of the Loins on the right ſide with another; which manner of derivation doth not confer a peculiar addition unto either. *Calius Rhodiginus* undertaking to give a reaſon of Ambidexters and *Left-handed* Men, delivereth a third opinion: Men, ſaith he, are Ambidexters, and uſe both *Hands* alike, when the heat of the Heart doth plentifully diſperſe into the left ſide, and that of the Liver into the right, and the ſpleen be alſo much

much dilated; but Men are *Left-handed* when ever it happeneth that the Heart and Liver are ſeated on the left-ſide; or when the Liver is on the right ſide, yet ſo obducted and covered with thick skins, that it cannot diffuſe its vertue into the right. Which reaſons are no way ſatisfactory; for herein the ſpleen is injuſtly introduced to invigorate the ſiniſter ſide, which being dilated it would rather infirm and debilitate. As for any tunicles or skins which ſhould hinder the Liver from enabling the dextral parts; we muſt not conceive it diffuſeth its vertue by meer irradiation, but by its veins and proper veſſels, which common skins and teguments cannot impede. And for the ſeat of the Heart and Liver in one ſide, whereby Men become *Left-handed*, it happeneth too rarely, to countenance an effect ſo common; for the ſeat of the Liver on the left ſide is monſtrous, and rarely to be met with in the obſervations of Phyſicians. Others not conſidering ambidextrous and *Left-handed* Men, do totally ſubmit unto the efficacy of the Liver; which though ſeated on the right ſide, yet by the ſubclavian diviſion doth equidiſtantly communicate its activity unto either Arm; nor will it ſalve the doubts of obſervation; for many are *Right-handed* whoſe Livers are weakly conſtituted, and many uſe the left, in whom that part is ſtrongeſt; and we obſerve in Apes, and other Animals, whoſe Liver is in the right, no regular prevalence therein.

And therefore the Brain, eſpecially the ſpinal Marrow, which is but the brain prolonged, hath a fairer plea hereto; for theſe are the principles of motion, wherein dextrality conſiſts; and are divided within and without the Crany. By which diviſion tranſmitting Nerves reſpectively unto either ſide; according to the indifferency, or original and native prepotency, there ariſeth an equality in both, or prevalency in either ſide. And ſo may it be made out, what many may wonder at, why ſome moſt actively uſe the contrary Arm and Leg; for the vigour of the one dependeth upon the upper part of the ſpine, but the other upon the lower.

And therefore many things are Philoſophically delivered concerning right and left, which admit of ſome ſuſpenſion. That a Woman upon a maſculine conception advanceth her right Leg, will not be found to anſwer ſtrict obſervation. That males are conceived in the right ſide of the womb, females in the left, though generally delivered, and ſupported by ancient teſtimony, will make no infallible account; it happening oft-times that males and females do lie upon both ſides, and Hermaphrodites for ought we know on either. It is alſo ſuſpicious what is delivered concerning the right and left teſticle, that males are begotten from the one, and females from the other. For though the left ſeminal vein proceedeth from the Emulgent, and is therefore conceived to carry down a ſerous and feminine matter; yet the ſeminal Arteries which ſend forth the active materials, are both derived from the great Artery. Beſide, this original of the left vein was thus contrived, to avoid the pulſation of the great Artery, over which it muſt have paſſed to attain unto the teſticle. Nor can we eaſily infer ſuch different effects from the divers ſituation of parts which have one end and office; for in the kidneys which have one office, the right is ſeated lower than the left, whereby it lieth free, and giveth way unto the Liver. And therefore alſo that way which is delivered for maſculine generation, to make a ſtrait ligature about the left teſticle, thereby to intercept the evacuation of that part, deſerveth conſideration. For one ſufficeth unto generation, as hath been obſerved in ſemicaſtration, and oft-times in carnous ruptures. Beſide, the ſeminal ejaculation proceeds not immediately from the teſticle, but from the ſpermatick glandules; and therefore *Ariſtotle* affirms (and reaſon cannot deny) that although there be nothing diffuſed from the teſticles, an *Horſe* or *Bull* may generate after caſtration; that is, from the ſtock and remainder of ſeminal matter, already prepared and ſtored up in the Proſtates or Glandules of generation.

How an Horſe or Bull may genera e after they be gelt.

Thirdly, Although we ſhould concede a right and left in Nature, yet in this common and received account we may err from the proper acception; miſtaking one ſide for another; calling that in Man and other Animals the

right

right which is the left, and that the left which is the right, and that in ſome things right and left, which is not properly either.

For firſt the right and left, are not defined by Philoſophers according to common acception, that is, reſpectively from one Man unto another, or any conſtant ſite in each; as though that ſhould be the right in one, which upon confront or facing, ſtands athwart or diagonally unto the other; but were diſtinguiſhed according to the activity and predominant locomotion upon either ſide. Thus *Ariſtotle* in his excellent Tract *de inceſſu animalium*, aſcribeth ſix poſitions unto Animals, anſwering the three dimenſions; which he determineth not by ſite or poſition unto the Heavens, but by the faculties and functions; and theſe are *Imum ſummum*, *Ante Retro*, *Dextra & Siniſtra*: that is the ſuperiour part, where the aliment is received, that the lower extream, where it is laſt expelled; ſo he termeth a Man a plant inverted; for he ſuppoſeth the root of a Tree the head or upper part thereof, whereby it receiveth its aliment, although therewith it reſpects the Center of the Earth, but with the other the Zenith; and this poſition is anſwerable unto longitude. Thoſe parts are anteriour and meaſure profundity, where the ſenſes, eſpecially the Eyes are placed, and thoſe poſterior which are oppoſite hereunto. The dextrous and ſiniſtrous parts of the body, make up the latitude; and are not certain and inalterable like the other; for that, ſaith he, is the right ſide, from whence the motion of the body beginneth, that is, the active or moving ſide; but that the ſiniſter which is the weaker or more quieſcent part. Of the ſame determination were the *Platonicks* and *Pythagoreans* before him; who conceiving the Heavens an animated body, named the *Eaſt*, the right or dextrous part, from whence began their motion; and thus the *Greeks*, from whence the *Latins* have borrowed their appellation, have named this hand Δέξια, denominating it not from the ſite, but office, from Δέχομαι *capio*, that is, the hand which receiveth, or is uſually imployed in that action.

Now upon theſe grounds we are moſt commonly miſtaken, defining that by ſituation which they determined by motion; and giving the term of right hand to that which doth not properly admit it. For firſt, Many in their Infancy are ſiniſtrouſly diſpoſed, and divers continue all their life Ἀριστερὸι, that is, left-handed, and have but weak and imperfect uſe of the right; now unto theſe, that hand is properly the right, and not the other eſteemed ſo by ſituation. Thus may *Ariſtotle* be made out, when he affirmeth the right claw of *Crabs* and *Lobſters* is biggeſt, if we take the right for the moſt vigorous ſide, and not regard the relative ſituation: for the one is generally bigger than the other, yet not always upon the ſame ſide. So may it be verified, what is delivered by *Scaliger* in his Comment, that Palſies do oftneſt happen upon the left ſide, if underſtood in this ſenſe; the moſt vigorous part protecting it ſelf, and protruding the matter upon the weaker and leſs reſiſtive ſide. And thus the Law of Common-Weals, that cut off the right hand of Malefactors, if Philoſophically executed, is impartial; otherwiſe the amputation not equally puniſheth all.

Some are Ἀμφιδέξιοι, that is, ambidextrous or right-handed on both ſides; which happeneth only unto ſtrong and * Athletical bodies, whoſe heat and ſpirits are able to afford an ability unto both. And therefore *Hippocrates* ſaith, that Women are not ambidextrous, that is, not ſo often as Men; for ſome are found, which indifferently make uſe of both. And ſo may *Ariſtotle* ſay, that only Men are ambidextrous; of this conſtitution was *Aſteropæus* in *Homer*, and *Parthenopeus* the *Theban* Captain in *Statius*: and of the ſame, do ſome conceive our Father *Adam* to have been, as being perfectly framed, and in a conſtitution admitting leaſt defect. Now in theſe Men the right hand is on both ſides, and that is not the left which is oppoſite unto the right, according to common acception.

* Apt for contention.

Again, Some are Ἀμφαυτερὸι, as *Galen* hath expreſſed it; that is, ambilevous or left-handed on both ſides; ſuch as with agility and vigour have not the uſe of either: who are not * gymnaſtically compoſed, nor actively uſe thoſe parts. Now in theſe there is no right hand: of this conſtitution are many Women, and ſome Men, who though they accuſtom themſelves unto

* Strongly or fit for corporal exercise.

either

either hand, do dexterously make use of neither. And therefore although the Political advice of *Aristotle* be very good, that Men should accustom themselves to the command of either hand: yet cannot the execution or performance thereof be general: for though there be many found that can use both, yet will there divers remain that can strenuously make use of neither.

Lastly, These lateralities in Man are not only fallible, if relatively determined unto each other, but made in reference unto the Heavens and quarters of the Globe: for those parts are not capable of these conditions in themselves, nor with any certainty respectively derived from us, nor from them to us again. And first in regard of their proper nature, the Heavens admit not these sinister and dexter respects; there being in them no diversity or difference, but a simplicity of parts, and equiformity in motion continually succeeding each other; so that from what point soever we compute, the account will be common unto the whole circularity. And therefore though it be plausible, it is not of consequence hereto what is delivered by *Solinus*. That Man was therefore a Microcosm or little world, because the dimensions of his positions were answerable unto the greater. For as in the Heavens the distance of the North and Southern pole, which are esteemed the superiour and inferiour points, is equal unto the space between the East and West, accounted the dextrous and sinistrous parts thereof; so is it also in Man; for the extent of his fathom or distance betwixt the extremity of the fingers of either hand upon expansion, is equal unto the space between the soal of the foot and the crown. But this doth but petitionarily infer a dextrality in the Heavens, and we may as reasonably conclude a right and left laterality in the Ark or naval edifice of *Noah*. For the length thereof was thirty cubits, the breadth fifty, and the height or profundity thirty; which well agreeth unto the proportion of Man; whose length, that is, a perpendicular from the vertex unto the soal of the foot is sextuple unto his breadth, or a right line drawn from the ribs of one side to another, and decuple unto his profundity; that is, a direct line between the breast-bone and the spine.

Again, They receive not these conditions with any assurance or stability from our selves. For the relative foundations and points of denomination, are not fixed and certain, but variously designed according to imagination. The Philosopher accounts that East from whence the Heavens begin their motion. The Astronomer regarding the South and Meridian Sun, calls that the dextrous part of Heaven which respecteth his right hand; and that is the West. Poets respecting the West, assign the name of right unto the North, which regardeth their right hand; and so must that of *Ovid* be explained, *utq; duæ dextrâ Zonæ, totidémq; sinistrâ*. But Augurs or Southsayers turning their face to the East, did make the right in the South; which was also observed by the *Hebrews* and *Chaldæans*. Now if we name the quarters of Heaven respectively unto our sides, it will be no certain or invariable denomination. For if we call that the right side of Heaven which is seated Easterly unto us, when we regard the Meridian Sun; the inhabitants beyond the Æquator and Southern Tropick when they face us, regarding the Meridian, will contrarily define it; for unto them, the opposite part of Heaven will respect the left, and the Sun arise to their right.

Declarable from the original expression. *Psalm* 89. 13.

And thus have we at large declared, that although the right be most commonly used, yet hath it no regular or certain root in nature. Since it is not confirmable from other Animals; Since in Children it seems either indifferent or more favourable in the other; but more reasonable for uniformity in action, that Men accustom unto one: Since the grounds and reasons urged for it, do not sufficiently support it: Since if there be a right and stronger side in nature, yet may we mistake in its denomination; calling that the right which is the left, and the left which is the right. Since some have one right, some both, some neither. And lastly, Since these affections in Man are not only fallible in relation unto one another, but made also in reference unto the Heavens, they being not capable of these conditions in themselves, nor with any certainty from us, nor we from them again.

And

And therefore what admiſſion we owe unto many conceptions concerning right and left, requireth circumſpection; that is, how far we ought to rely upon the remedy in *Kiranides*, that is, the left Eye of an *Hedg-hog* fried in oyl to procure ſleep, and the right Foot of a *Frog* in a *Dears* skin for the *Gout*; or that to dream of the loſs of right or left Tooth, preſageth the death of male or female kindred, according to the doctrine of *Artemidorus*. What verity there is in that numeral conceit in the lateral diviſion of Man by even and odd, aſcribing the odd unto the right ſide, and even unto the left; and ſo by parity or imparity of Letters in Mens names to determine misfortunes on either ſide of their Bodies; by which account in *Greek* numeration, *Hephæſtus* or *Vulcan* was lame in the right Foot, and *Annibal* loſt his right Eye. And laſtly, What ſubſtance there is in that Auſpicial principle, and fundamental doctrine of Ariolation, that the left hand is ominous, and that good things do paſs ſiniſtrouſly upon us, becauſe the left Hand of Man reſpected the right Hand of the Gods, which handed their favours unto us.

CHAP. VI.

Of Swimming and Floating.

THat Men ſwim naturally, if not diſturbed by fear; that Men being drowned and ſunk, do float the ninth day when their Gall breaketh; that Women drowned, ſwim prone, but Men ſupine, or upon their backs; are popular affirmations, whereto we cannot aſſent. And firſt, that Man ſhould ſwim naturally, becauſe we obſerve it is no leſſon unto other Animals, we are not forward to conclude; for other Animals ſwim in the ſame manner as they go, and need no other way of motion for natation in the Water, than for progreſſion upon the Land. And this is true, whether they move *per latera*, that is, two Legs of one ſide together, which is Tolutation or Ambling; or *per diametrum*, lifting one Foot before, and the croſs Foot behind, which is ſuccuſſation or trotting; or whether *per frontem*, or *quadratum*, as *Scaliger* terms it, upon a ſquare baſe, the Legs of both ſides moving together, as *Frogs* and ſalient Animals, which is properly called leaping. For by theſe motions they are able to ſupport and impel themſelves in the Water, without alteration in the ſtroak of their Legs, or poſition of their Bodies.

But with Man it is performed otherwiſe: for in regard of ſite he alters his natural poſture and ſwimmeth prone; whereas he walketh erect. Again, in progreſſion, the Arms move parallel to the Legs, and the Arms and Legs unto each other; but in natation they interſect and make all ſorts of Angles. And laſtly, in progreſſive motion, the Arms and Legs do move ſucceſſively, but in natation both together; all which aptly to perform, and ſo as to ſupport and advance the Body, is a point of Art, and ſuch as ſome in their young and docile years could never attain. But although ſwimming be acquired by Art, yet is there ſomewhat more of Nature in it than we obſerve in other habits, nor will it ſtrictly fall under that definition; for once obtained, it is not to be removed; nor is there any who from diſuſe did ever yet forget it.

Secondly, That perſons drowned ariſe and float the ninth day when their Gall breaketh, is a queſtionable determination both in the time and cauſe. For the time of floating, it is uncertain according to the time of putrefaction, which ſhall retard or accelerate according to the ſubject and ſeaſon of the year; for as we obſerved, *Cats* and *Mice* will ariſe unequally, and at different times, though drowned at the ſame. Such as are fat do commonly

ly float ſooneſt, for their Bodies ſooneſt ferment, and that ſubſtance approacheth neareſt unto Air: and this is one of *Ariſtotle*'s reaſons why dead *Eels* will not float, becauſe, ſaith he, they have but ſlender Bellies, and little fat.

Whydrowned Bodies float after a time.

As for the cauſe, it is not ſo reaſonably imputed unto the breaking of the Gall as the putrefaction or corruptive fermentation of the Body, whereby the unnatural heat prevailing, the putrefying parts do ſuffer a turgeſcence and inflation, and becoming aery and ſpumous affect to approach the air, and aſcend unto the ſurface of the Water. And this is alſo evidenced in Eggs, whereof the ſound ones ſink, and ſuch as are adled ſwim, as do alſo thoſe which are termed *Hypenemia* or wind-eggs; and this is alſo a way to ſeparate Seeds, whereof ſuch as are corrupted and ſteril, ſwim; and this agreeth not only unto the Seeds of Plants lockt up and capſulated in their husks, but alſo unto the ſperm and ſeminal humour of Man; for ſuch a paſſage hath *Ariſtotle* upon the Inquiſition and teſt of its fertility.

That the breaking of the Gall is not the cauſe hereof, experience hath informed us. For opening the *abdomen*, and taking out the Gall in *Cats* and *Mice*, they did notwithſtanding ariſe. And becauſe we had read in *Rhodiginus* of a Tyrant, who to prevent the emergency of murdered Bodies, did uſe to cut off their Lungs, and found Mens minds poſſeſſed with this reaſon; we committed ſome unto the Water without Lungs, which notwithſtanding floated with the others. And to compleat the experiment, although we took out the Guts and Bladder, and alſo perforated the *Cranium*, yet would they ariſe, though in a longer time. From theſe obſervations in other Animals, it may not be unreaſonable to conclude the ſame in Man, who is too noble a ſubject on whom to make them expreſly, and the caſual opportunity too rare almoſt to make any. Now if any ſhall ground this effect from Gall or Choler, becauſe it is the higheſt humour and will be above the reſt; or being the fiery humour will readieſt ſurmount the Water, we muſt confeſs in the common putreſcence it may promote elevation, which the breaking of the Bladder of Gall, ſo ſmall a part in Man, cannot conſiderably advantage.

Laſtly, That Women drowned float prone, that is, with their Bellies downward, but Men ſupine or upward, is an aſſertion wherein the ὅτι or point it ſelf is dubious; and were it true, the reaſon alledged for it, is of no validity. The reaſon yet currant was firſt expreſſed by *Pliny*, *veluti pudori defunctorum parcente naturâ*, nature modeſtly ordaining this poſition to conceal the ſhame of the dead; which hath been taken up by *Solinus*, *Rhodiginus*, and many more. This indeed (as *Scaliger* termeth it) is *ratio civilis non Philoſophica*, ſtrong enough for Morality or Rhetoricks, not for Philoſophy or Phyſicks. For firſt, in Nature the concealment of ſecret parts is the ſame in both Sexes, and the ſhame of their reveal equal: ſo *Adam* upon the taſte of the Fruit was aſhamed of his Nakedneſs as well as *Eve*. And ſo likewiſe in *America* and Countries unacquainted with Habits, where modeſty conceals theſe parts in one Sex, it doth it alſo in the other; and therefore had this been the intention of Nature, not only Women but Men alſo had ſwimmed downwards; the poſture in reaſon being common unto both, where the intent is alſo common.

Again, While herein we commend the modeſty, we condemn the wiſdom of Nature: for that prone poſition we make her contrive unto the Woman, were beſt agreeable unto the Man, in whom the ſecret parts are very anteriour and more diſcoverable in a ſupine and upward poſture. And therefore *Scaliger* declining this reaſon, hath recurred unto another from the difference of parts in both Sexes; *Quod ventre vaſto ſunt mulieres plenóque inteſtinis, itaque minus impletur & ſubſidet, inanior maribus quibus nates præponderant*: If ſo, then Men, with great Bellies will float downward, and only *Callipygæ*, and Women largely compoſed behind, upward. But *Anatomiſts* obſerve, that to make the larger cavity for the Infant, the Hanch-bones in Women, and conſequently the parts appen-

dent are more protuberant than they are in Men. They who aſcribe the cauſe unto the Breaſts of Women, take not away the doubt; for they reſolve not why Children float downward, who are included in that Sex, though not in the reaſon alledged. But hereof we ceaſe to diſcourſe, leſt we undertake to afford a reaſon of the * Golden-tooth; that is, to invent or aſſign a cauſe, when we remain unſatisfied or unaſſured of the effect.

* of the cauſe whereof much diſpute was made, and at laſt proved an impoſture.

That a *Mare* will ſooner drown than a *Horſe*, though commonly opinion'd, is not I fear experienced: nor is the ſame obſerved in the drowning of *Whelps* and *Kitlins*. But that a Man cannot ſhut or open his Eyes under Water, eaſie experiment may convict. Whether Cripples and mutilated Perſons, who have loſt the greateſt part of their Thighs, will not ſink but float, their Lungs being abler to waft up their Bodies, which are in others overpoiſed by the hinder Legs; we have not made experiment. Thus much we obſerve, That Animals drown downwards; and the ſame is obſervable in *Frogs*, when the hinder Legs are cut off. But in the Air moſt ſeem to periſh headlong from high places; however *Vulcan* thrown from Heaven, be made to fall on his feet.

CHAP. VII.

Concerning Weight.

THAT Men weigh heavier dead than alive, if experiment hath not failed us, we cannot reaſonably grant. For though the trial hereof cannot ſo well be made on the Body of Man, nor will the difference be ſenſible in the abate of Scruples or Drams, yet can we not confirm the ſame in leſſer Animals, from whence the inference is good; and the affirmative of *Pliny* ſaith, that it is true in all. For exactly weighing and ſtrangling a *Chicken* in the Scales; upon an immediate ponderation, we could diſcover no ſenſible difference in weight; but ſuffering it to lie eight or ten hours, until it grew perfectly cold, it weighed moſt ſenſibly lighter; the like we attempted, and verified in *Mice*, and performed their trials in Scales, that would turn upon the eighth or tenth part of a Grain.

Now whereas ſome alledge that ſpirits are lighter ſubſtances, and naturally aſcending, do elevate and waft the Body upward, whereof dead Bodies being deſtitute, contract a greater gravity; although we concede that ſpirits are light, comparatively unto the Body, yet that they are abſolutely ſo, or have no weight at all, we cannot readily allow. For ſince Philoſophy affirmeth, that ſpirits are middle ſubſtances between the Soul and Body, they muſt admit of ſome corporeity, which ſuppoſeth weight of gravity. Beſide, in Carcaſſes warm, and Bodies newly diſanimated, while tranſpiration remaineth, there do exhale and breath out vaporous and fluid parts, which carry away ſome power of gravitation. Which though we allow, we do not make anſwerable unto living expiration; and therefore the *Chicken* or *Mice* were not ſo light being dead, as they would have been after ten hours kept alive; for in that ſpace a man abateth many Ounces. Nor of it had ſlept, for in that ſpace of ſleep, a Man will ſometimes abate forty Ounces; nor if it had been in the middle of Summer, for then a Man weigheth ſome Pounds leſs, than in the height of Winter; according to experience, and the ſtatick Aphoriſms of *Sanctorius*.

Again, Whereas Men affirm they perceive an addition of ponderoſity in dead Bodies, comparing them uſually unto Blocks and Stones, whenſoever they lift or carry them; this acceſſional preponderancy is rather in appearance than reality. For being deſtitute of any motion, they confer no

relief

relief unto the Agents, or Elevators; which makes us meet with the ſame complaints of gravity in animated and living Bodies, where the Nerves ſubſide, and the faculty locomotive ſeems aboliſhed; as may be obſerved in the lifting or ſupporting of perſons inebriated, Apoplectical, or in Lipothymies and Swoundings.

Many are alſo of opinion, and ſome learned Men maintain, that Men are lighter after meals than before, and that by a ſupply and addition of ſpirits obſcuring the groſs ponderoſity of the aliment ingeſted; but the contrary hereof we have found in the trial of ſundry perſons in different Sex and Ages. And we conceive Men may miſtake if they diſtinguiſh not the ſenſe of levity unto themſelves, and in regard of the ſcale or deciſion of trutination. For after a draught of Wine, a Man may ſeem lighter in himſelf from ſudden refection, although he be heavier in the balance, from a corporal and ponderous addition; but a Man in the Morning is lighter in the Scale, becauſe in ſleep ſome pounds have perſpired; and is alſo lighter unto himſelf, becauſe he is refected.

And to ſpeak ſtrictly, a Man that holds his breath is weightier while his Lungs are full, than upon expiration. For a bladder blown is weightier than one empty; and if it contain a quart, expreſſed and emptied it will abate about a quarter of a Grain. And therefore we ſomewhat miſtruſt the experiment of a Pumice-ſtone taken up by *Montanus*, in his Comment upon *Avicenna*, where declaring how the rarity of parts, and numeroſity of pores, occaſioneth a lightneſs in Bodies, he affirms that a Pumice-ſtone powdered, is lighter than one entire; which is an experiment beyond our ſatisfaction; for beſide that abatement can hardly be avoided in the Trituration; if a Bladder of good capacity will ſcarce include a Grain of Air, a Pumice of three or four Drachms, cannot be preſumed to contain the hundredth part thereof; which will not be ſenſible upon the exacteſt beams we uſe. Nor is it to be taken ſtrictly what is delivered by the learned Lord *Verulam*, and referred unto further experiment; That a diſſolution of Iron in *Aqua fortis*, will bear as good weight as their Bodies did before, notwithſtanding a great deal of waſte by a thick vapour that iſſueth during the working; for we cannot find it to hold either in Iron or Copper, which is diſſolved with leſs ebullition; and hereof we made trial in Scales of good exactneſs: wherein if there be a defect, or ſuch as will not turn upon quarter Grains, there may be frequent miſtakes in experiments of this nature. That alſo may be conſidered which is delivered by *Hamerus Poppius*, that *Antimony* calcin'd or reduced to Aſhes by a Burning-Glaſs, although it emit a groſs and ponderous exhalation, doth rather exceed than abate its former gravity. Nevertheleſs, ſtrange it is; how very little and almoſt inſenſible abatement there will be ſometimes in ſuch operations, or rather ſome encreaſe, as in the refining of Metals, in the teſt of Bone-aſhes, according to experience: and in a burnt Brick, as *Monſieur de Calve* affirmeth. Miſtake may be made in this way of trial, when the *Antimony* is not weighed immediately upon the calcination; but permitted the Air, it imbibeth the humidity thereof, and ſo repaireth its gravity.

Baſilica Antimonii.

Des Pierres.

CHAP. VIII.

Of the paſſage of Meat and Drink.

THat there are different paſſages for Meat and Drink, the Meat or dry aliment deſcending by the one, the Drink or moiſtning vehicle by the other, is a popular Tenet in our days, but was the aſſertion of learned men of old. For the ſame was affirmed by *Plato*, maintained by *Euſtathius* in *Macrobius*, and is deducible from *Eratoſthenes*, *Eupolis* and *Euripides*. Now herein Men contradict experience, not well underſtanding *Anatomy*, and the uſe of parts. For at the Throat there are two cavities or conducting parts; the one the *Oeſophagus* or Gullet, ſeated next the ſpine, a part official unto nutrition, and whereby the aliment both wet and dry is conveyed unto the ſtomach; the other (by which 'tis conceived the Drink doth paſs) is the weazon, rough artery, or wind-pipe, a part inſervient to voice and reſpiration; for thereby the air deſcendeth into the lungs, and is communicated unto the heart. And therefore all Animals that breath or have lungs, have alſo the weazon; but many have the gullet or feeding channel, which have no lungs or wind-pipe; as Fiſhes which have gills, whereby the heart is refrigerated; for ſuch thereof as have lungs and reſpiration, are not without the weazon, as Whales and cetaceous Animals.

Again, Beſide theſe parts deſtin'd to divers offices, there is a peculiar proviſion for the wind-pipe, that is, a cartilagineous flap upon the opening of the Larynx or Throttle, which hath an open cavity for the admiſſion of the air; but leſt thereby either meat or drink ſhould deſcend, Providence hath placed the *Epiglottis*, *Ligula*, or flap like an Ivy leaf, which always cloſeth when we ſwallow, or when the meat and drink paſſeth over it into the gullet. Which part although all have not that breath, as all cetaceous and oviparous Animals, yet is the weazon ſecured ſome other way; and therefore in Whales that breath, leſt the water ſhould get into the lungs, an ejection thereof is contrived by a *Fiſtula* or ſpout at the head. And therefore alſo though Birds have no *Epiglottis*, yet can they ſo contract the rim or chink of their *Larynx*, as to prevent the admiſſion of wet or dry ingeſted; either whereof getting in, occaſioneth a cough, until it be ejected. And this is the reaſon why a Man cannot drink and breath at the ſame time; why, if we laugh while we drink, the drink flies out at the noſtrils; why, when the water enters the weazon, Men are ſuddenly drowned; and thus muſt it be underſtood, when we read of one that died by the ſeed of a Grape, and another by an hair in milk.

Why a man cannot drink and breath at once.

Now if any ſhall ſtill affirm, that ſome truth there is in the aſſertion, upon the experiment of *Hippocrates*, who killing an Hog after a red potion, found the tincture thereof in the *Larynx*; if any will urge the ſame from medical practice, becauſe in affections both of Lungs and Weazon, Phyſicians make uſe of Syrups, and Lambitive Medicines; we are not averſe to acknowledge, that ſome may diſtil and inſinuate into the Wind-pipe, and Medicines may creep down, as well as the Rheum before them: yet to conclude from hence, that Air and Water have both one common paſſage, were to ſtate the queſtion upon the weaker ſide of the diſtinction, and from a partial or guttulous irrigation, to conclude a total deſcenſion.

Anacreon the Poet, if the ſtory be taken literally.

CHAP.

CHAP. IX.

Of Sneezing.

COncerning Sternutation or Sneezing, and the custom of saluting or blessing upon that motion, it is pretended, and generally believed to derive its original from a disease, wherein Sternutation proved mortal, and such as sneezed, died. And this may seem to be proved from *Carolus Sigonius*, who in his History of *Italy*, makes mention of a Pestilence in the time of *Gregory* the Great, that proved pernicious and deadly to those that sneezed. Which notwithstanding will not sufficiently determine the grounds hereof: that custom having an elder *Æra*, than this Chronology affordeth.

For although the age of *Gregory* extend above a thousand, yet is this custom mentioned by *Apuleius*, in the Fable of the Fuller's wife, who lived three hundred years before; by *Pliny* in that Problem of his, *Cur sternutantes salutantur*; and there are also reports that *Tiberius* the Emperour, otherwise a very sowre Man, would perform this rite most punctually unto others, and expect the same from others unto himself. *Petronius Arbiter*, who lived before them both, and was Proconsul of *Bithynia* in the Reign of *Nero*, hath mentioned it in these words, *Gyton collectione spiritûs plenus, ter continuò ità sternutavit, ut grabatum concuteret, ad quem motum Eumolpus conversus, Salvere Gytona jubet.* *Cœlius Rhodiginus* hath an example hereof among the *Greeks*, far antienter than these, that is, in the time of *Cyrus* the younger; when consulting about their retreat, it chanced that one among them sneezed; at the noise whereof, the rest of the Soldiers called upon *Jupiter Soter*. There is also in the Greek * Anthology, a remarkable mention hereof in an Epigram, upon one *Proclus*; the Latin whereof we shall deliver, as we find it often translated.

* A Collection of Greek Epigrams, *Titulo* εἰς δυσειδεῖς.

Non potis est Proclus digitis emungere nasum,
Namq; est pro nasi mole pusilla manus:
Non vocat ille Jovem sternutans, quippe nec audit
Sternutamentum, tam procul aure sonat.

Proclus with his hand his nose can never wipe,
His hand too little is his nose to gripe;
He Sneezing calls not *Jove*, for why? he hears
Himself not sneeze, the sound's so far from's ears.

Nor was this only an ancient custom among the *Greeks* and *Romans*, and is still in force with us, but is received at this day in remotest parts of *Africa*. For so we read in *Codignus*; that upon a Sneeze of the Emperour of *Monomotapa*, there passed acclamations successively through the City. And as remarkable an example there is of the same custom, in the remotest parts of the East, recorded in the Travels of *Pinto*.

De rebus Abassinorum.

But the history will run much higher, if we should take in the *Rabinical* account hereof; that Sneezing was a mortal sign even from the first Man, until it was taken off by the special supplication of *Jacob*. From whence, as a thankful acknowledgment, this salutation first began; and was after continued by the expression of *Tobim Chaiim*, or *vita bona*, by standers by, upon all occasion of Sneezing.

Buxt. Lex. Chald.

Now the ground of this ancient custom was probably the opinion the Ancients held of sternutation, which they generally conceived to be a good sign or a bad, and so upon this motion accordingly used a *Salve* or Ζεῦ σῶσον, as a gratulation for the one, and a deprecation for the other. Now of the

the waies whereby they enquired and determined its ſignality; the firſt was natural, ariſing from Phyſical cauſes, and conſequences oftentimes naturally ſucceeding this motion; and ſo it might be juſtly eſteemed a good ſign. For Sneezing being properly a motion of the brain, ſuddenly expelling through the noſtrils what is offenſive unto it, it cannot but afford ſome evidence of its vigour; and therefore, ſaith *Ariſtotle*, they that hear it, προσκυνῶσιν ὡς ἱερόν, honour it as ſomewhat ſacred, and a ſign of Sanity in the diviner part; and this he illuſtrates from the practice of Phyſicians, who in perſons near death, do uſe Sternutatories, or ſuch medicines as provoke unto Sneezing; when if the faculty awaketh, and Sternutation enſueth, they conceive hopes of life, and with gratulation receive the ſigns of ſafety. And ſo is it alſo of good ſignality, according to that of *Hippocrates*, that Sneezing cureth the hiccough, and is profitable unto Women in hard labour; and ſo is it good in Lethargies, Apoplexies, Catalepſies and Coma's. And in this natural way it is ſometime likewiſe of bad effects or ſigns, and may give hints of deprecation; as in diſeaſes of the cheſt; for therein *Hippocrates* condemneth it as too much exagitating; in the beginning of *Catarrhs*, according unto *Avicenna*, as hindering concoction; in new and tender conceptions (as *Pliny* obſerveth) for then it endangers abortion.

Whence Sternutation or Sneezing proceeds.

Problem. Sect. 33.

In what caſes a ſign of good. 2 Kings 4.35.

In what of bad.

The ſecond way was ſuperſtitious and Augurial, as *Cœlius Rhodiginus* hath illuſtrated in teſtimonies as ancient as *Theocritus* and *Homer*: as appears from the *Athenian* Maſter, who would have retired, becauſe a Boat-man ſneezed; and the teſtimony of *Auſtin*, that the Antients were wont to go to bed again if they ſneezed while they put on their ſhoe. And in this way it was alſo of good and bad ſignification; ſo *Ariſtotle* hath a Problem, why Sneezing from noon unto midnight was good, but from night to noon unlucky. So *Euſtathius* upon *Homer* obſerves, that Sneezing to the left hand was unlucky, but proſperous unto the right; ſo, as *Plutarch* relateth, when *Themiſtocles* ſacrificed in his Galley before the battle of *Xerxes*, and one of the aſſiſtants upon the right hand ſneezed; *Euphrantides* the South-ſayer, preſaged the victory of the *Greeks*, and the overthrow of the *Perſians*.

Thus we may perceive the cuſtom is more ancient than commonly conceived; and theſe opinions hereof in all ages, not any one diſeaſe to have been the occaſion of this ſalute and deprecation. Ariſing at firſt from this vehement and affrighting motion of the brain, inevitably obſervable unto the ſtanders by; from whence ſome finding dependent effects to enſue; others aſcribing hereto as a cauſe what perhaps but caſually or inconnexedly ſucceeded; they might proceed unto forms of ſpeeches, felicitating the good, or deprecating the evil to follow.

CHAP. X.

Of the Jews.

THat *Jews* ſtink naturally, that is, that in their race and nation there is an evil ſavour, is a received opinion we know not how to admit; although concede many queſtionable points, and diſpute not the verity of ſundry opinions which are of affinity hereto. We will acknowledg that certain odours attend on animals, no leſs than certain colours; that pleaſant ſmels are not confined unto Vegetables, but found in divers animals, and ſome more richly than in Plants. And though the Problem of *Ariſtotle* enquire why no animal ſmels ſweet beſide the Pard? yet later diſcoveries add divers ſorts of *Monkeys*, the *Civet Cat* and *Gazela*, from which our Musk

Musk proceedeth. We confeſs that beſide the ſmell of the ſpecies, there may be individual odours, and every Man may have a proper and peculiar ſavour; which although not perceptible unto Man, who hath this ſenſe but weak, yet ſenſible unto *Dogs*, who hereby can ſingle out their Maſters in the dark. We will not deny that particular Men have ſent forth a pleaſant ſavour, as *Theophraſtus* and *Plutarch* report of *Alexander* the Great, and *Tzetzes* and *Cardan* do teſtifie of themſelves. That ſome may alſo emit an unſavory odour, we have no reaſon to deny; for this may happen from the quality of what they have taken; the Fœtor whereof may diſcover it ſelf by ſweat and urine, as being unmaſterable by the natural heat of Man, not to be dulcified by concoction beyond an unſavory condition: the like may come to paſs from putrid humours, as is often diſcoverable in putrid and malignant Fevers. And ſometime alſo in groſs and humid bodies even in the latitude of Sanity; the natural heat of the parts being inſufficient for a perfect and through digeſtion, and the errors of one concoction not rectifiable by another. But that an unſavory odour is gentilitious or national unto the *Jews*, if rightly underſtood, we cannot well concede; nor will the information of Reaſon or Senſe induce it.

For firſt, Upon conſult of Reaſon, there will be found no eaſie aſſurance to faſten a material or temperamental propriety upon any Nation; there being ſcarce any condition (but what depends upon clime) which is not exhauſted or obſcured from the commixture of introvenient Nations either by commerce or conqueſt; much more will it be difficult to make out this affection in the *Jews*; whoſe race however pretended to be pure, muſt needs have ſuffered inſeparable commixtures with Nations of all ſorts; not only in regard of their proſelytes, but their univerſal diſperſion; ſome being poſted from ſeveral parts of the earth, others quite loſt, and ſwallowed up in thoſe Nations where they planted. For the Tribes of *Reuben*, *Gad*, part of *Manaſſes* and *Naphthali*, which were taken by *Aſſur*, and the reſt at the Sacking of *Samaria*, which were led away by *Salmanaſſer* into *Aſſyria*, and after a year and half arrived at *Arſereth*, as is delivered in *Eſdras*; theſe I ſay never returned; and are by the *Jews* as vainly expected as their *Meſſias*. Of thoſe of the Tribe of *Judah* and *Benjamin*, which were led captive into *Babylon* by *Nebuchadnezzar*, many returned under *Zorobabel*; the reſt remained, and from thence long after upon invaſion of the *Saracens*, fled as far as *India*; where yet they are ſaid to remain, but with little difference from the *Gentiles*.

The Tribes that returned to *Judea*, were afterward widely diſperſed; for beſide ſixteen thouſand which *Titus* ſent to *Rome* unto the triumph of his Father *Veſpaſian*, he ſold no leſs than an hundred thouſand for ſlaves. Not many years after, *Adrian* the Emperour, who ruined the whole Country, tranſplanted many thouſands into *Spain*, from whence they diſperſed into divers Countreys, as into *France* and *England*, but were baniſhed after from both. From *Spain* they diſperſed into *Africa*, *Italy*, *Conſtantinople*, and the Dominions of the *Turk*, where they remain as yet in very great numbers. And if (according to good relations) where they may freely ſpeak it, they forbear not to boaſt that there are at preſent many thouſand *Jews* in *Spain*, *France* and *England*, and ſome diſpenſed withal even to the degree of Prieſthood; it is a matter very conſiderable, and could they be ſmelled out, would much advantage, not only the Church of Chriſt, but alſo the Coffers of Princes.

Now having thus lived in ſeveral Countries, and always in ſubjection, they muſts needs have ſuffered many commixtures; and we are ſure they are not exempted from the common contagion of Venery contracted firſt from Chriſtians. Nor are fornications unfrequent between them both; there commonly paſſing opinions of invitement, that their Women deſire copulation with them rather than their own Nation, and affect Chriſtian carnality above circumciſed venery. It being therefore acknowledged, that ſome are loſt, evident that others are mixed, and not aſſured that any are diſtinct,

it

it will be hard to eſtabliſh this quality upon the *Jews*, unleſs we alſo transfer the ſame unto thoſe whoſe generations are mixed, whoſe genealogies are *Jewiſh*, and naturally derived from them.

Again, if we concede a National unſavourineſs in any people, yet ſhall we find the *Jews* leſs ſubject hereto than any, and that in thoſe regards which moſt powerfully concur to ſuch effects, that is, their diet and generation. As for their Diet whether in obedience unto the precepts of reaſon, or the injunctions of parſimony, therein they are very temperate; ſeldom offending in ebriety or exceſs of drink, nor erring in guloſity or ſuperfluity of meats; whereby they prevent indigeſtion and crudities, and conſequently putreſcence of humors. They have in abomination all fleſh maimed, or the inwards any way vitiated; and therefore eat no meat but of their own killing. They obſerve not only Faſts at certain times, but are reſtrained unto very few diſhes at all times; ſo few, that whereas S. *Peter*'s ſheet will hardly cover our Tables, their Law doth ſcarce permit them to ſet forth a Lordly feaſt; nor any way to anſwer the luxury of our times, or thoſe of our fore-fathers. For of fleſh their Law reſtrains them many ſorts, and ſuch as compleat our Feaſts: That Animal, *Propter convivia natum*, they touch not, nor any of its preparations, or parts ſo much in reſpect at *Roman* Tables, nor admit they unto their board, *Hares*, *Conies*, *Herons*, *Plovers* or *Swans*. Of *Fiſhes* they only taſte of ſuch as have both fins and ſcales; which are comparatively but few in number, ſuch only, ſaith *Ariſtotle*, whoſe Egg or ſpawn is arenaceous; whereby are excluded all cetaceous and cartilagineous *Fiſhes*; many pectinal, whoſe ribs are rectilineal; many coſtal, which have their ribs embowed; all ſpinal, or ſuch as have no ribs, but only a back-bone, or ſomewhat analogous thereto, as *Eels*, *Congers*, *Lampries*; all that are teſtaceous, as *Oyſters*, *Cockles*, *Wilks*, *Scollops*, *Muſcles*; and likewiſe all cruſtaceous, as *Crabs*, *Shrimps* and *Lobſters*. So that obſerving a ſpare and ſimple diet, whereby they prevent the generation of crudities; and faſting often, whereby they might alſo digeſt them; they muſt be leſs inclinable unto this infirmity than any other Nation, whoſe proceedings are not ſo reaſonable to avoid it.

The Jews generally very temperate.

Quanti eſt gula, quæ ſibi totos ponit Apros! Animal propter convivia natum.

As for their generations and conceptions (which are the purer from good diet) they become more pure and perfect by the ſtrict obſervation of their Law; upon the injunctions whereof, they ſeverely obſerve the times of Purification, and avoid all copulation, either in the uncleanneſs of themſelves, or impurity of their Women. A Rule, I fear, not ſo well obſerved by Chriſtians; whereby not only conceptions are prevented, but if they proceed, ſo vitiated and defiled, that durable inquinations remain upon the birth. Which, when the conception meets with theſe impurities, muſt needs be very potent; ſince in the pureſt and moſt fair conceptions, learned Men derive the cauſe of *Pox* and *Meazels*, from principles of that nature; that is, the menſtruous impurities in the Mothers blood, and virulent tinctures contracted by the Infant, in the nutriment of the womb.

The original or material cauſes of the Pox and Meazels.

Laſtly, Experience will convict it; for this offenſive odor is no way diſcoverable in their Synagogues where many are, and by reaſon of their number could not be concealed: nor is the ſame diſcernable in commerce or converſation with ſuch as are cleanly in Apparel, and decent in their Houſes. Surely the Viziers and *Turkiſh* Baſha's are not of this opinion; who, as Sir. *Henry Blunt* informeth, do generally keep a *Jew* of their private Council. And were this true, the *Jews* themſelves do not ſtrictly make out the intention of their Law, for in vain do they ſcruple to approach the dead, who livingly are cadaverous, or fear any outward pollution, whoſe temper pollutes themſelves. And laſtly, were this true, yet our opinion is not impartial; for unto converted *Jews* who are of the ſame ſeed, no Man imputeth this unſavoury odor; as though Aromatized by their converſion, they loſt their ſcent with their Religion, and ſmelt no longer than they ſavoured of the *Jew*.

Now

Now the ground that begat or propagated this assertion, might be the distasteful averseness of the Christian from the *Jew*, upon the villany of that fact, which made them abominable and stink in the nostrils of all Men. Which real practice, and metaphorical expression, did after proceed into a literal construction; but was a fraudulent illation; for such an evil savour their father *Jacob* acknowledged in himself, when he said, his sons had made him stink in the Land, that is, to be abominable unto the inhabitants thereof. Now how dangerous it is in sensible things to use metaphorical expressions unto the people, and what absurd conceits they will swallow in their literals; an impatient example we have in our own profession; who having called an eating *Ulcer* by the name of a *Wolf*, common apprehension conceives a reality therein; and against our selves, ocular affirmations are pretended to confirm it. *Gen. 34.*

The nastiness of that Nation, and sluttish course of life hath much promoted the opinion, occasioned by their servile condition at first, and inferiour ways of parsimony ever since; as is delivered by Mr. *Sandys*: They are generally fat, saith he, and rank of the savours which attend upon sluttish corpulency. The *Epithets* assigned them by ancient times, have also advanced the same; for *Ammianus Marcellinus* describeth them in such language; and *Martial* more ancient, in such a relative expression sets forth unsavoury *Bassa*.

Quod jejunia Sabbatariorum
Mallem, quàm quod oles, olere, Bassa.

From whence notwithstanding we cannot infer an inward imperfection in the temper of that Nation; it being but an effect in the breath from outward observation, in their strict and tedious fasting; and was a common effect in the breaths of other Nations, became a Proverb among the *Greeks*, and the reason thereof begot a Problem in *Aristotle*. Νηστείας ὄζειν, *Jejunia olere. De sterilitate.*

Lastly, If all were true, and were this savour conceded, yet are the reasons alledged for it no way satisfactory. *Hucherius*, and after him *Alsarius Crucius*, imputes this effect unto their abstinence from salt or salt meats; which how to make good in the present diet of the *Jews*, we know not; nor shall we conceive it was observed of old, if we consider they seasoned every Sacrifice, and all Oblations whatsoever; whereof we cannot deny a great part was eaten by the Priests. And if the Offering were of Flesh, it was salted no less than thrice, that is, once in the common Chamber of Salt, at the foot-step of the Altar, and upon the top thereof, as is at large delivered by *Maimonides*. Nor if they refrained all Salt, is the illation very urgent; for many there are, not noted for ill Odours, which eat no Salt at all; as all carnivorous Animals, most Children, many whole Nations, and probably our Fathers after the Creation; there being indeed in every thing we eat, a natural and concealed Salt, which is separated by digestions, as doth appear in our Tears, Sweat and Urins, although we refrain all Salt, or what doth seem to contain it. *Cruc. Med. Epist.*

Another cause is urged by *Campegius*, and much received by Christians; that this ill savour is a curse derived upon them by Christ, and stands, as a badge or brand of a generation that crucified their *Salvator*. But this is a conceit without all warrant; and an easie way to take off dispute in what point of obscurity soever. A method of many Writers, which much depreciates the esteem and value of Miracles; that is, therewith to salve not only real verities, but also non-existencies. Thus have elder times not only ascribed the immunity of *Ireland* from any venemous beast, unto the Staff or Rod of *Patrick*; but the Long-tails of *Kent*, unto the malediction of *Austin*.

Thus therefore, although we concede that many opinions are true which hold some conformity unto this, yet in assenting hereto, many difficulties must arise: it being a dangerous point to annex a constant property unto any

Nation, and much more this unto the *Jew*; since this quality is not verifiable by observation; since the grounds are feeble that should establish it; and lastly, since if all were true, yet are the reasons alledged for it, of no sufficiency to maintain it.

CHAP. XI.

Of Pygmies.

BY *Pygmies* we understand a dwarfish race of people, or lowest diminution of mankind, comprehended in one Cubit, or as some will have it, in two Foot or three Spans; not taking them single, but Nationally considering them, and as they make up an aggregated habitation. Whereof although affirmations be many, and testimonies more frequent than in any other point which wise men have cast into the list of fables, yet that there is, or ever was such a Race or Nation, upon exact and confirmed testimonies, our strictest enquiry receives no satisfaction.

I say, exact testimonies, first, In regard of the Authors, from whom we derive the account: for though we meet herewith in *Herodotus*, *Philostratus*, *Mela*, *Pliny*, *Solinus*, and many more; yet were they derivative Relators, and the primitive Author was *Homer*; who, using often Similies, as well to delight the ear, as to illustrate his matter, in the third of his *Iliads* compareth the *Trojans* unto *Cranes*, when they descend against the *Pygmies*; which was more largely set out by *Oppian*, *Juvenal*, *Mantuan*, and many Poets since, and being only a pleasant figment in the fountain, became a solemn story in the stream, and current still among us.

Again, Many professed Enquirers have rejected it; *Strabo* an exact and judicious Geographer hath largely condemned it as a fabulous story. *Julius Scaliger*, a diligent enquirer, accounts thereof, but as a Poetical fiction; *Ulysses Aldrovandus* a most exact Zoographer in an express discourse hereon, concludes the story fabulous, and a Poetical account of *Homer*; and the same was formerly conceived by *Eustathius*, his excellent Commentator. *Albertus Magnus*, a man oft-times too credulous, herein was more than dubious; for he affirmeth, if any such Dwarfs were ever extant, they were surely some kind of *Apes*: which is a conceit allowed by *Cardan*, and not esteemed improbable by many others.

Hist. Animal. lib. 8.

There are I confess two testimonies, which from their authority admit of consideration. The first of *Aristotle*, whose words are these, ἔστι δὲ ὁ τόπος, &c. That is, *Hic locus est quem incolunt Pygmæi, non enim id fabula est, sed pusillum genus ut aiunt.* Wherein indeed *Aristotle* plays the *Aristotle*, that is, the wary and evading assertor; For though with *non est fabula*, he seem at first to confirm it, yet at the last he claps in, *ut aiunt*, and shakes the belief he put before upon it. And therefore I observe *Scaliger* hath not translated the first; perhaps supposing it surreptitious or unworthy so great an Assertor. And truly for those Books of Animals, or work of eight hundred talents, as *Athenæus* terms it, although ever to be admired, as containing most excellent truths; yet are many things therein delivered upon relation, and some repugnant unto the history of our Senses; as we are able to make out in some, and *Scaliger* hath observed in many more, as he hath freely declared in his Comment upon that piece.

The

The ſecond teſtimony is deduced from holy Scripture; thus rendered in the vulgar Tranſlation, *Sed & Pygmæi qui erant in turribus tuis, pharetras ſuas ſuſpenderunt in muris tuis per gyrum*: from whence notwithſtanding we cannot infer this Aſſertion, for firſt the Tranſlators accord not, and the *Hebrew* word *Gammadim* is very variouſly rendered. Though *Aquila*, *Vatablus* and *Lyra* will have it *Pygmæi*, yet in the Septuagint, it is no more than Watchmen; and ſo in the *Arabick* and High *Dutch*. In the *Chaldee*, *Cappadocians*, in *Symmachus*, *Medes*, and in the *French*, thoſe of *Gamad*. *Theodotion* of old, and *Tremellius* of late, have retained the Textuary word; and ſo have the *Italian*, Low *Dutch* and *Engliſh* Tranſlators, That is, *The Men of Arvad were upon thy walls round about, and the Gammadims were in thy Towers*. *Ezek.* 27. 12.

Nor do men only diſſent in the Tranſlation of the word, but in the Expoſition of the ſenſe and meaning thereof; for ſome by *Gammadims* underſtand a people of *Syria*, ſo called from the City *Gamala*; ſome hereby underſtand the *Cappadocians*, many the *Medes*: and hereof *Forerius* hath a ſingular Expoſition, conceiving the Watchmen of *Tyre* might well be called *Pygmies*, the Towers of that City being ſo high, that unto Men below, they appeared in a cubital ſtature. Others expounded it quite contrary to common acception, that is, not Men of the leaſt, but of the largeſt ſize; ſo doth *Cornelius* conſtrue *Pygmæi*, or *viri cubitales*, that is, not Men of a Cubit high, but of the largeſt ſtature, whoſe height like that of Giants, is rather to be taken by the Cubit than the Foot; in which phraſe we read the meaſure of *Goliah*, whoſe height is ſaid to be ſix Cubits and a Span. Of affinity hereto is alſo the Expoſition of *Jerom*; not taking *Pygmies* for dwarfs, but ſtout and valiant Champions; not taking the ſenſe of πυγμὴ, which ſignifies the Cubit meaſure, but that which expreſſeth Pugils; that is, Men fit for Combat and the exerciſe of the Fiſt. Thus can there be no ſatisfying illation from this Text, the diverſity or rather contrariety of Expoſitions and Interpretations, diſtracting more than confirming the truth of the ſtory.

See Mr. *Fullers* excellent deſcription of *Paleſtine*.

Again, I ſay, exact teſtimonies, in reference unto circumſtantial relations ſo diverſly or contrarily delivered. Thus the Relation of *Ariſtotle* placeth them above *Egypt* towards the head of *Nile* in *Africa*; *Philoſtratus* affirms they are about *Ganges* in *Aſia*; and *Pliny* in a third place, that is, *Gerania* in *Scythia*: ſome write they fight with *Cranes*, but *Menecles* in *Athenæus* affirms they fight with *Partridges*; ſome ſay they ride on *Partridges*, and ſome on the backs of *Rams*.

Laſtly, I ſay, confirmed teſtimonies; for though *Paulus Jovius* delivers there are *Pygmies* beyond *Japan*; *Pigafeta*, about the *Molucca's*; and *Olaus Magnus* placeth them in *Greenland*: yet wanting frequent confirmation in a matter ſo confirmable, their affirmation carrieth but ſlow perſwaſion; * and wiſe men may think there is as much reality in the † *Pygmies* of *Paracelſus*; that is, his non-Adamical men, or middle natures betwixt Men and Spirits.

* The ſtory of Pygmies rejected.

† By Pygmies intending Fairies and other Spirits about the earth; as by Nymphs and Salamanders, ſpirits of fire and water. *Lib. De Pygmæis, Nymphis*, &c.

There being thus no ſufficient confirmation of their verity, ſome doubt may ariſe concerning their poſſibility, wherein, ſince it is not defined in what dimenſions the Soul may exerciſe her faculties, we ſhall not conclude impoſſibility; or that there might not be a race of *Pygmies*, as there is ſometimes of Giants. So may we take in the opinion of *Auſtin*, and his Comment *Ludovicus*; but to believe they ſhould be in the ſtature of a Foot or Span, requires the pre-aſpection of ſuch a one as *Philetas* the Poet in *Athenæus*; who was fain to faſten Lead unto his Feet, leſt the wind ſhould blow him away. Or that other in the ſame Author, who was ſo little *ut ad obolum accederet*; a ſtory ſo ſtrange, that we might herein excuſe the PRINTER, did not the account of *Ælian* accord unto it, as *Caſaubon* hath obſerved in his learned Animadverſions.

Laſtly, If any ſuch Nation there were, yet is it ridiculous what Men have delivered of them; that they fight with *Cranes* upon the backs of *Rams* or *Partridges*: or what is delivered by *Cteſias*, that they are *Negroes* in the midſt of *India*; whereof the King of that Country, entertaineth three thouſand Archers for his Guard. Which is a relation below the tale of *Oberon*; nor could they better defend him, than the Emblem ſaith, they offended *Hercules* whilſt he ſlept; that is, to wound him no deeper, than to awake him.

CHAP. XII.

Of the great Climacterical year, that is, Sixty three.

CErtainly the Eyes of the Underſtanding, and thoſe of the Senſe are differently deceived in their greateſt objects; the Senſe apprehending them in leſſer magnitudes than their dimenſions require; ſo it beholdeth the Sun, the Stars, and the Earth it ſelf. But the Underſtanding quite otherwiſe: for that aſcribeth unto many things far larger horizons than their due circumſcriptions require: and receiveth them with amplifications which their reality will not admit. Thus hath it fared with many Heroes and moſt worthy perſons, who being ſufficiently commendable from true and unqueſtionable merits, have received advancement from falſhood and the fruitful ſtock of Fables. Thus hath it happened unto the Stars, and Luminaries of Heaven: who being ſufficiently admirable in themſelves, have been ſet out by effects, no way dependent on their efficiencies, and advanced by amplifications to the queſtioning of their true endowments. Thus is it not improbable it hath alſo fared with number, which though wonderful in it ſelf, and ſufficiently magnifiable from its demonſtrable affections, hath yet received adjections from the multiplying conceits of men, and ſtands laden with additions, which its equity will not admit.

And ſo perhaps hath it happened unto the numbers 7 and 9, which multiplied into themſelves do make up Sixty three, commonly eſteemed the great Climacterical of our Lives. For the days of men are uſually caſt up by Septenaries, and every ſeventh year conceived to carry ſome altering character with it, either in the temper of body, mind, or both. But among all other, three are moſt remarkable, that is, 7 times 7 or forty nine, 9 times 9 or eighty one, and 7 times 9 or the year of Sixty three; which is conceived to carry with it the moſt conſiderable fatality; and conſiſting of both the other numbers was apprehended to compriſe the vertue of either: is therefore expected and entertained with fear, and eſteemed a favour of Fate to paſs it over. Which notwithſtanding many ſuſpect to be but a Panick terrour, and men to fear they juſtly know not what: and to ſpeak indifferently, I find no ſatisfaction; nor any ſufficiency in the received grounds to eſtabliſh a rational fear.

The great Climacterical, Sixty three, no ſuch dangerous year.

Now herein to omit Aſtrological conſiderations (which are but rarely introduced) the popular foundation whereby it hath continued, is firſt, the extraordinary power and ſecret virtue conceived to attend theſe numbers: whereof we muſt confeſs there have not wanted not only eſpecial commendations, but very ſingular conceptions. Among Philoſophers, *Pythagoras* ſeems to have played the leading part; which was long after continued by his diſciples, and the *Italick* School. The Philoſophy of *Plato*, and moſt of the *Platoniſts* abounds in numeral conſiderations: above all, *Philo* the learned Jew hath acted this part even to ſuperſtition: beſtowing divers Pages in ſumming up every thing, which might advantage

this

this number. Which, notwithstanding, when a serious Reader shall perpend, he will hardly find any thing that may convince his judgment, or any further perswade, than the lenity of his belief, or prejudgment of reason inclineth.

For first, Not only the numbers of 7 and 9 from considerations abstruse, have been extolled by most, but all or most of the other Digits have been as mystically applauded. For the number of One and Three have not been only admired by the Heathens, but from adorable grounds, the unity of God, and mystery of the Trinity, admired by many Christians. The number of four stands much admired, not only in the quaternity of the Elements, which are the principles of bodies, but in the letters of the Name of God, which in the *Greek*, *Arabian*, *Persian*, *Hebrew* and *Egyptian*, consisteth of that number; and was so venerable among the *Pythagoreans*, that they swore by the number four. That of six hath found many leaves in its favour; not only for the daies of the Creation, but its natural consideration, as being a perfect number, and the first that is compleated by its parts; that is, the sixth, the half, and the third, 1. 2. 3. Which drawn into a summ, make six. The number of Ten hath been as highly extolled, as containing even, odd, long, plain, quadrate and cubical numbers; and *Aristotle* observed with admiration, that *Barbarians* as well as *Greeks*, did use a numeration unto Ten, which being so general, was not to be judged casual, but to have a foundation in nature. So that not only 7 and 9, but all the rest have had their Elogies, as may be observed at large in *Rhodiginus*, and in several Writers since: every one extolling number, according to his subject, and as it advantaged the present discourse in hand.

Again, They have been commended not only from pretended grounds in nature, but from artificial, casual or fabulous foundations: so have some endeavoured to advance their admiration, from the 9 Muses, from the 7 Wonders of the World, from the 7 Gates of *Thebes*: in that 7 Cities contended for *Homer*, in that there are 7 Stars in *Ursa minor*, and 7 in *Charles*'s wayn, or *Plaustrum* of *Ursa major*. Wherein indeed although the ground be natural, yet either from Constellations or their remarkable parts, there is the like occasion to commend any other number, the number 5 from the stars in *Sagitta*, 3 from the girdle of *Orion*, and 4 from *Equiculus*, *Crusero*, or the feet of the Centaur: yet are such as these clapt in by very good Authors, and some not omitted by *Philo*.

Nor are they only extolled from Arbitrary and Poetical grounds, but from foundations and principles false, or dubious. That Women are menstruant, and Men pubescent at the year of twice seven is accounted a punctual truth: which period nevertheless we dare not precisely determine, as having observed a variation and latitude in most, agreeable unto the heat of clime or temper; Men arising variously unto virility, according to the activity of causes that promote it. *Sanguis menstruosus ad diem, ut plurimum, septimum durat*, saith *Philo*. Which notwithstanding is repugnant unto experience, and the doctrine of *Hippocrates*, who in his book, *de diæta*, plainly affirmeth, it is thus but with few Women, and only such as abound with pituitous and watery humours.

It is further conceived to receive addition, in that there are 7 heads of *Nile*: but we have made manifest elsewhere, that by the description of Geographers, they have been sometime more, and are at present fewer.

In that there were 7 Wise men of *Greece*, which though generally received, yet having enquired into the verity thereof we cannot so readily determine it: for in the life of *Thales*, who was accounted in that number, *Diogenes Laertius* plainly saith, *Magna de eorum numero discordia est*; some holding but four, some ten, others twelve, and none agreeing in their names, though according in their number.

In that there are just 7 Planets or errant Stars in the lower Orbs of Heaven: but it is now demonstrable unto Sense, that there are many more; as *Galileo* hath declared, that is, two more in the Orb of *Saturn*, and no less than four or more in the Sphere of *Jupiter*. And the like may be said of the *Pleiades* *Nuncius Sydereus.*

Pleiades or 7 Stars, which are also introduced to magnifie this number; for whereas scarce discerning six, we account them 7, by his relation, there are no less than forty.

That the Heavens are encompassed with 7 Circles, is also the allegation of *Philo*; which are in his account, the Arctick, Antarctick, the Summer and Winter Tropicks, the Æquator, Zodiack, and the Milky circle; whereas by Astronomers they are received in greater number. For though we leave out the Lacteous circle (which *Aratus*, *Geminus*, and *Proclus*, out of him hath numbred among the rest) yet are there more by four than *Philo* mentions; that is, the Horizon, Meridian and both the Colures; circles very considerable, and generally delivered, not only by *Ptolomie*, and the Astronomers since his time, but such as flourished long before, as *Hipparchus* and *Eudoxus*. So that for ought I know, if it make for our purpose, or advance the theme in hand, with equal liberty we may affirm there were 7 Sibyls, or but 7 signs in the Zodiack circle of Heaven.

Τεὶς μάκαρες Δαναοὶ καὶ τετράκις.

That verse in *Virgil* translated out of *Homer*, *O térq; quatérq; beati*; that is, as men will have it, seven times happy, hath much advanced this number in critical apprehensions; yet is not this construction so indubitably to be received, as not at all to be questioned: for though *Rhodiginus*, *Beroaldus*, and others from the authority of *Macrobius* so interpret it; yet *Servius* his ancient Commentator conceives no more thereby than a finite number for indefinite, and that no more is implied than often happy. *Strabo* the ancientest of them all, conceives no more by this in *Homer*, than a full and excessive expression; whereas in common phrase and received language, he should have termed them thrice happy; herein exceeding that number, he called them four times happy, that is, more than thrice. And this he illustrates by the like expression of *Homer*, in the speech of *Circe*; who to expres the dread and terrour of the Ocean, sticks not unto the common form of speech in the strict account of its reciprocations, but largely speaking, saith, it ebbs and flows no less than thrice a day, *terq; die revomit fluctus, iterúmq; resorbet*. And so when 'tis said by *Horace*, *fœlices ter & amplius*, the exposition is sufficient, if we conceive no more than the letter fairly beareth, that is, four times, or indefinitely more than thrice.

Lib. 10.

But the main considerations which most set off this number, are observations drawn from the motions of the Moon, supposed to be measured by sevens; and the critical or decretory daies dependent on that number. As for the motion of the Moon, though we grant it to be measured by sevens, yet will not this advance the same before its fellow numbers; for hereby the motion of other Stars are not measured, the fixed Stars by many thousand years, the Sun by 365 daies, the superiour Planets by more, the inferiour by somewhat less. And if we consider the revolution of the first Movable, and the daily motion from East to West, common unto all the Orbs, we shall find it measured by another number, for being performed in four and twenty hours, it is made up of 4 times 6: and this is the measure and standard of other parts of time, of Months, of Years, Olympiads, Lustres, Indictions of Cycles, Jubilees, *&c.*

What a Solary Month is.

Again, Months are not only Lunary, and measured by the Moon, but also Solary, and determined by the motion of the Sun; that is, the space wherein the Sun doth pass 30 degrees of the Ecliptick. By this Month *Hippocrates* computed the time of the Infants gestation in the womb; for 9 times 30, that is, 270 daies, or compleat 9 months, make up forty weeks, the common compute of Women. And this is to be understood, when he saith, two daies make the fifteenth, and 3 the tenth part of a month. This was the month of the ancient *Hebrews* before their departure out of *Egypt*: and hereby the compute will fall out right, and the account concur, when in one place it is said, The waters of the flood prevailed an hundred and fifty daies, and in another it is delivered, That they prevailed from the seventeenth day of the second month, unto the seventeenth day of the seventh. As for hebdomadal periods or weeks, although

De octomestri partu.

in

in regard of their Sabbaths, they were obſerved by the *Hebrews*, yet it is not apparent, the antient *Greeks* or *Romans* uſed any: but had another diviſion of their Months into Ides, Nones and Calends.

Moreover, Months howſoever taken, are not exactly diviſible into ſeptenaries or weeks, which fully contain ſeven days: whereof four times do make compleatly twenty eight. For, beſide the uſual or Calendary month, there are but four conſiderable: the month of Peragration, of Apparition, of Conſecution, and the Medical or Decretorial month; whereof ſome come ſhort, others exceed this account. A month of Peragration, is the time of the Moons revolution from any part of the Zodiack, unto the ſame again, and this containeth but 27 daies, and about 8 hours: which cometh ſhort to compleat the ſeptenary account. The month of Conſecution, or as ſome will term it, of progreſſion, is the ſpace between one conjunction of the Moon with the Sun, unto another: and this containeth 29 daies and an half: for the Moon returning unto the ſame point wherein it was kindled by the Sun, and not finding it there again (for in the mean time, by its proper motion it hath paſſed through 2 ſigns) it followeth after, and attains the Sun in the ſpace of 2 daies and 4 hours more, which added unto the account of Peragration, make 29 daies and an half: ſo that this month exceedeth the latitude of Septenaries, and the fourth part comprehendeth more than 7 daies. A month of Apparition, is the ſpace wherein the Moon appeareth (deducting three daies wherein it commonly diſappeareth; and being in combuſtion with the Sun, is preſumed of leſs activity,) and this containeth but 26 daies and 12 hours. The Medical month not much exceedeth this, conſiſting of 26 daies and 22 hours, and is made up out of all the other months. For if out of 29 and an half, the month of Conſecution, we deduct 3 daies of diſappearance, there will remain the month of Apparition 26 daies and 12 hours: whereto if we add 27 days and 8 hours, the month of Peragration, there will ariſe 53 daies and 10 hours, which divided by 2, makes 26 daies and 22 hours; called by Phyſicians the Medical month: introduced by *Galen* againſt *Archigenes*, for the better compute of Decretory or Critical daies.

As for the Critical daies (ſuch I mean wherein upon a decertation between the diſeaſe and nature, there enſueth a ſenſible alteration, either to life or death,) the reaſons thereof are rather deduced from Aſtrology, than Arithmetick: for accounting from the beginning of the diſeaſe, and reckoning on unto the ſeventh day, the Moon will be in a Tetragonal or Quadrate aſpect, that is, 4 ſigns removed from that wherein the diſeaſe began: in the fourteenth day it will be in an oppoſite Aſpect: and at the end of the third ſeptenary, Tetragonal again: as will moſt graphically appear in the figures of Aſtrologers, eſpecially *Lucas Gauricus*, *De diebus decretoriis*.

Again, (Beſide that computing by the Medical month, the firſt hebdomade or ſeptenary conſiſts of 6 daies, ſeventeen hours and an half, the ſecond happeneth in 13 daies and eleven hours, and the third but in the twentieth natural day) what *Galen* firſt, and *Abenezra* ſince obſerved in his Tract of Critical daies, in regard of Eccentricity and the Epicycle or leſſer orb wherein it moveth, the motion of the Moon is various and unequal; whereby the Critical account muſt alſo vary. For though its middle motion be equal, and of 13 degrees, yet in the other it moveth ſometimes fifteen, ſometimes leſs than twelve. For moving in the upper part of its orb, it performeth its motion more ſlowly than in the lower; inſomuch that being at the height, it arriveth at the Tetragonal and oppoſite ſigns ſooner, and the Critical day will be in 6 and 13; and being at the loweſt, the critical account will be out of the latitude of 7, nor happen before the eighth or ninth day. Which are conſiderations not to be neglected in the compute of decretory daies, and manifeſtly declare that other numbers muſt have a reſpect herein as well as 7 and fourteen.

Laſtly,

Laſtly, Some things to this intent are deduced from holy Scripture; thus is the year of *Jubilee* introduced to magnifie this number, as being a year made out of 7 times 7; wherein notwithſtanding there may be a miſapprehenſion; for this ariſeth not from 7 times 7, that is, 49; but was obſerved the fiftieth year, as is expreſſed, *And you ſhall hallow the fiftieth year, a* Jubilee *ſhall that fiftieth year be unto you.* Anſwerable whereto is the Expoſition of the *Jews* themſelves, as is delivered by *Ben-Maimon*; that is, the year of *Jubilee* cometh not into the account of the years of 7, but the forty ninth is the Releaſe, and the fiftieth the year of *Jubilee.* Thus is it alſo eſteemed no ſmall advancement unto this number, that the Genealogy of our Saviour is ſummed up by 14, that is, this number doubled; according as is expreſſed, *Matt.* 1. So all the generations from *Abraham* to *David* are fourteen generations; and from *David* unto the carrying away into *Babylon*, are fourteen generations; and from the carrying away into *Babylon* unto *Chriſt*, are fourteen generations. Which nevertheleſs muſt not be ſtrictly underſtood as numeral relations require; for from *David* unto *Jeconiah* are accounted by *Matthew* but 14 generations; whereas according to the exact account in the Hiſtory of Kings, there were at leaſt 17; and 3 in this account, that is, *Ahazias*, *Joas* and *Amazias*, are left out. For ſo it is delivered by the Evangeliſt: And *Joram* begat *Ozias*: whereas in the regal Genealogy there are 3 ſucceſſions between: for *Ozias* or *Uzziah* was the ſon of *Amazias*, *Amazias* of *Joas*, *Joas* of *Azariah*, and *Azariah* of *Joram*: ſo that in ſtrict account, *Joram* was the *Abavus* or Grand-father twice removed, and not the Father of *Ozias.* And theſe two omitted deſcents made a very conſiderable meaſure of time, in the Royal chronology of *Judah*: for though *Azariah* reigned but one year, yet *Joas* reigned forty, and *Amazias* no leſs than nine and twenty. However therefore theſe were delivered by the Evangeliſt, and carry (no doubt) an incontroulable conformity unto the intention of his delivery: yet are they not appliable unto preciſe numerality, nor ſtrictly to be drawn unto the rigid teſt of numbers.

Laſtly, Though many things have been delivered by Authors concerning number, and they transferred unto the advantage of their nature, yet are they oft-times otherwiſe to be underſtood, than as they are vulgarly received in active and cauſal conſiderations; they being many times delivered Hieroglyphically, Metaphorically, Illuſtratively, and not with reference unto action or cauſality. True it is, that God made all things in number, weight and meaſure, yet nothing by them or through the efficacy of either. Indeed our daies, actions and motions being meaſured by time (which is but motion meaſured) what ever is obſervable in any, falls under the account of ſome number; which notwithſtanding cannot be denominated the cauſe of thoſe events. So do we unjuſtly aſſign the power of Action even unto Time it ſelf; nor do they ſpeak properly who ſay that Time conſumeth all things; for Time is not effective, nor are bodies deſtroyed by it, but from the action and paſſion of their Elements in it; whoſe account it only affordeth: and meaſuring out their motion, informs us in the periods and terms of their duration, rather than effecteth or phyſically produceth the ſame.

De annis Climactericis. De occultis naturæ miraculis. Bel. lib. 5.

A ſecond conſideration which promoteth this opinion, are confirmations drawn from Writers, who have made obſervations, or ſet down favourable reaſons for this Climacterical year; ſo have *Henricus Ranzovius*, *Baptiſta Codronchus*, and *Levinus Lemnius* much confirmed the ſame; but above all, that memorable Letter of *Auguſtus* ſent unto his Nephew *Caius*, wherein he encourageth him to celebrate his nativity, for he had now eſcaped Sixty three, the great Climacterical and dangerous year unto man: which notwithſtanding rightly perpended, it can be no ſingularity to queſtion it, nor any new Paradox to deny it.

For firſt, It is implicitely, and upon conſequence denied by *Ariſtotle* in his Politicks, in that diſcourſe againſt *Plato*, who meaſured the viciſſitude and mutation of States, by a periodical fatality of number. *Ptolomie* that famous

famous Mathematician plainly ſaith, he will not deliver his doctrines by parts and numbers which are ineffectual, and have not the nature of cauſes; now by theſe numbers, ſaith *Rhodiginus* and *Mirandula*, he implieth Climacterical years, that is, ſeptenaries, and novenaries ſet down by the bare obſervation of numbers. *Cenſorinus*, an Author of great authority, and ſufficient antiquity, ſpeaks yet more amply in his book *De die Natali*, wherein expreſly treating of Climacterical dayes, he thus delivereth himſelf. Some maintain that 7 times 7, that is forty nine, is moſt dangerous of any other, and this is the moſt general opinion; others unto 7 times 7, add 9 times 9, that is, the year of eighty one, both which conſiſting of ſquare and quadrate numbers, were thought by *Plato* and others to be of great conſideration; as for this year of Sixty three or 7 times 9, though ſome eſteem it of moſt danger, yet do I conceive it leſs dangerous than the other; for though it containeth both numbers above named, that is, 7 and 9, yet neither of them ſquare or quadrate; and as it is different from them both, ſo is it not potent in either. Nor is this year remarkable in the death of many famous men. I find indeed that *Ariſtotle* died this Year, but he by the vigour of his mind, a long time ſuſtained a Natural infirmity of ſtomach; ſo that it was a greater wonder he attained unto Sixty three, than that he lived no longer. The Pſalm of *Moſes* hath mentioned a year of danger differing from all theſe: and that is ten times 7 or ſeventy; for ſo it is ſaid, The dayes of Man are threeſcore and ten. And the very ſame is affirmed by *Solon*, as *Herodotus* relates in a ſpeech of his unto *Cræſus*, *Ego annis ſeptuaginta humanæ vitæ modum definio*: and ſurely that year muſt be of greateſt danger, which is the Period of all the reſt; and feweſt ſafely paſs thorow that, which is ſet as a bound for few or none to paſs. And therefore the conſent of elder times, ſetling their conceits upon Climacters, not only differing from this of ours, but one another; though ſeveral Nations and Ages do fancy unto themſelves different years of danger, yet every one expects the ſame event, and conſtant verity in each.

Again, Though *Varro* divided the dayes of Man into five portions, *Hippocrates* into 7, and *Solon* into 10; yet probably their diviſions were to be received with latitude, and their conſiderations not ſtrictly to be confined unto their laſt unities. So when *Varro* extendeth *Pueritia* unto 15. *Adoleſcentia* unto 30. *Juventus* unto 35. there is a latitude between the terms or Periods of compute, and the verity holds good in the accidents of any years between them. So when *Hippocrates* divideth our life into 7 degrees or ſtages, and maketh the end of the firſt 7. Of the ſecond 14. Of the third 28. Of the fourth 35. Of the fifth 47. Of the ſixth 56. And of the ſeventh, the laſt year when ever it happeneth; herein we may obſerve, he maketh not his diviſions preciſely by 7 and 9, and omits the great Climacterical; beſide there is between every one at leaſt the latitude of 7 years, in which ſpace or interval, that is either in the third or fourth year, what ever falleth out is equally verified of the whole degree, as though it had happened in the ſeventh. *Solon* divided it into ten Septenaries, becauſe in every one thereof, a Man received ſome ſenſible mutation; in the firſt is Dedentition or falling of teeth: in the ſecond Pubeſcence; in the third the Beard groweth; in the fourth ſtrength prevails; in the fifth maturity for iſſue; in the ſixth moderation of appetite: in the ſeventh prudence, *&c.* Now herein there is a tolerable latitude; and though the diviſion proceed by 7, yet is not the total verity to be reſtrained unto the laſt year; nor conſtantly to be expected the Beard ſhould be compleat at 21. or Wiſdom acquired juſt in 49. And thus alſo though 7 times 9, contain one of thoſe ſeptenaries, and doth alſo happen in our declining years; yet might the events thereof be imputed unto the whole ſeptenary, and be more reaſonably entertained with ſome latitude, than ſtrictly reduced unto the laſt number, or all the accidents from 56. imputed unto Sixty three.

Thirdly, Although this Opinion may ſeem confirmed by obſervation, and Men may ſay it hath been ſo obſerved, yet we ſpeak alſo upon experience, and do believe that Men from obſervation will collect no ſatisfaction. That other years may be taken againſt it, eſpecially if they have the advantage to precede it; as ſixty againſt ſixty three, and ſixty three againſt ſixty ſix. For fewer attain to the latter than the former; and ſo ſurely in the firſt ſeptenary do moſt die, and probably alſo in the very firſt year; for all that ever lived were in the account of that year; beſide, the infirmities that attend it are ſo many, and the Body that receives them ſo tender and inconfirmed, we ſcarce count any alive that is not paſt it.

De catena temporis.

Fabritius Paduanius diſcourſing of the great Climacterical, attempts a numeration of eminent Men, who died in that year; but in ſo ſmall a number, as not ſufficient to make a conſiderable Induction. He mentioneth but four, *Diogenes Cynicus*, *Dionyſius Heracleoticus*, *Xenocrates Platonicus*, and *Plato*. As for *Dionyſius*, as *Cenſorinus* witneſſeth, he famiſhed himſelf in the 82 year of his life; *Xenocrates* by the teſtimony of *Laertius* fell into a Cauldron, and died the ſame year: and *Diogenes* the *Cynick*, by the ſame teſtimony lived almoſt unto ninety. The date of *Plato*'s death is not exactly agreed on, but all diſſent from this which he determineth: *Neanthes* in *Laertius* extendeth his dayes unto 84. *Suidas* unto 82. But *Hermippus* defineth his death in 81. And this account ſeemeth moſt exact; for if, as he delivereth, *Plato* was born in the 88 Olympiad, and died in the firſt year of the 108, the account will not ſurpaſs the year of 81, and ſo in his death he verified the Opinion of his life, and of the life of Man, whoſe period, as *Cenſorinus* recordeth, he placeth in the Quadrate of 9, or 9 times 9, that is, eighty one: and therefore as *Seneca* delivereth, the *Magicians* at *Athens* did ſacrifice unto him, as declaring in his death ſomewhat above humanity; becauſe he died in the day of his nativity, and without deduction juſtly accompliſhed the year of eighty one.

Method. Hiſt.

Bodine, I confeſs, delivers a larger liſt of Men that died in this year, *Moriuntur innumerabiles anno ſexageſimo tertio, Ariſtoteles, Chryſippus, Bocatius, Bernardus, Eraſmus, Lutherus, Melanthon, Sylvius, Alexander, Jacobus Sturmius, Nicolaus Cuſanus, Thomas Linacer, eodem anno Cicero cæſus eſt.* Wherein, beſide that it were not difficult to make a larger Catalogue of memorable perſons that died in other years, we cannot but doubt the verity of his Induction. As for *Sylvius* and *Alexander*, which of that name he meaneth I know not; but for *Chryſippus*, by the teſtimony of *Laertius*, he died in the 73 year, *Bocatius* in the 62, *Linacer* the 64, and *Eraſmus* exceeded 70, as *Paulus Jovius* hath delivered in his Elogy of learned Men. And as for *Cicero*, as *Plutarch* in his life affirmeth, he was ſlain in the year of 64; and therefore ſure the queſtion is hard ſet, and we have no eaſie reaſon to doubt, when great and entire Authors ſhall introduce injuſtifiable examples, and authorize their aſſertions by what is not authentical.

Fourthly, They which proceed upon ſtrict numerations, and will by ſuch regular and determined wayes meaſure out the lives of Men, and periodically define the alterations of their tempers; conceive a regularity in mutations, with an equality in conſtitutions, and forget that variety which Phyſicians therein diſcover. For ſeeing we affirm that Women do naturally grow old before Men, that the cholerick fall ſhort in longævity of the ſanguine; that there is *ſenium ante ſenectum*, and many grow old before they arrive at age, we cannot affix unto them all one common point of danger, but ſhould rather aſſign a reſpective fatality unto each. Which is concordant unto the doctrine of the Numeriſts, and ſuch as maintain this Opinion: for they affirm that one number reſpecteth Men, another Women, as *Bodin* explaining that of *Seneca*, *Septimus quiſq annus ætati ſignum imprimit*, ſubjoins, *Hoc de maribus dictum oportuit, hoc primum intueri licet, perfectum numerum, id eſt, ſextum fœminas, ſeptenarium mares immutare.*

Cholerick Men commonly ſhorter lived.

Fifthly, Since we eſteem this Opinion to have ſome ground in Nature, and that nine times ſeven revolutions of the Sun, imprint a dangerous Character

Character on ſuch as arrive unto it; it will leave ſome doubt behind, in what ſubjection hereunto were the lives of our forefathers preſently after the Flood, and more eſpecially before it; who attaining unto 8 or 900 years, had not their Climacters computable by digits, or as we do account them; for the great Climacterical was paſt unto them before they begat Children, or gave any Teſtimony of their Virility; for we read not that any begat Children before the age of ſixty five. And this may alſo afford a hint to enquire, what are the Climacters of other animated creatures; whereof the lives of ſome attain not ſo far as this of ours, and that of others extend a conſiderable ſpace beyond it.

Laſtly, The imperfect accounts that Men have kept of time, and the difference thereof both in the ſame and divers Common-wealths, will much diſtract the certainty of this aſſertion. For though there were a fatality in this year, yet divers were, and others might be out in their account, aberring ſeveral wayes from the true and juſt compute, and calling that one year, which perhaps might be another.

For firſt, They might be out in the commencement of beginning of their account; for every Man is many months elder than he computeth: For although we begin the ſame from our nativity, and conceive that no arbitrary, but natural term of compute; yet for the duration of life or exiſtence, we are liable in the Womb unto the uſual diſtinctions of time; and are not to be exempted from the account of age and life, where we are ſubject to diſeaſes, and often ſuffer death. And therefore *Pythagoras*, *Hippocrates*, *Diocles*, *Avicenna* and others, have ſet upon us numeral relations and temporal conſiderations in the Womb; not only affirming the Birth of the ſeventh month to be vital, that of the eighth mortal, but the progreſſion thereto to be meaſured by rule, and to hold a proportion unto motion and formation. As what receiveth motion in the ſeventh, to be perfected in the Triplicities; that is, the time of conformation unto motion is double, and that from motion unto the Birth, treble; So what is formed the 35 day, is moved the ſeventieth, and born the 210 day. And therefore if any inviſible cauſality there be, that after ſo many years doth evidence it ſelf at Sixty three, it will be queſtionable whether its activity only ſet out at our nativity, and begin not rather in the Womb, wherein we place the like conſiderations. Which doth not only entangle this aſſertion, but hath already embroiled the endeavours of Aſtrology in the erection of Schemes, and the judgment of Death or diſeaſes; for being not incontroulably determined, at what time to begin, whether at conception, animation or excluſion (it being indifferent unto the influence of Heaven to begin at either) they have invented another way, that is, to begin *ab Hora quæſtionis*, as *Haly*, *Meſſahallach*, *Ganivetus*, and *Guido Bonatus* have delivered.

Again, In regard of the meaſure of time by months and years, there will be no ſmall difficulty; and if we ſhall ſtrictly conſider it, many have been and ſtill may be miſtaken. For neither the motion of the Moon, whereby months are computed; nor of the Sun, whereby years are accounted, conſiſteth of whole numbers, but admits of fractions, and broken parts, as we have already declared concerning the Moon. That of the Sun conſiſteth of 365 dayes, and almoſt 6 hours, that is, wanting eleven minutes; which 6 hours omitted, or not taken notice of, will in proceſs of time largely deprave the compute; and this is the occaſion of the Biſſextile or Leap-year, which was not obſerved in all times, nor punctually in all Common-wealths, ſo that in Sixty three years there may be loſt almoſt 18 dayes, omitting the intercalation of one day every fourth year, allowed for this quadrant, or 6 hours ſupernumerary. And though the ſame were obſerved, yet to ſpeak ſtrictly, a Man may be ſomewhat out in the account of his age at Sixty three; for although every fourth year we inſert one day, and ſo fetch up the quadrant, yet thoſe eleven minutes whereby the year comes ſhort of perfect 6 hours, will in the circuit of thoſe years ariſe unto certain hours; and in a larger progreſſion of time unto certain dayes. Whereof at preſent we find experience in the Calender we obſerve. For the

Julian year of 365 daies being eleven minutes larger than the annual revolution of the Sun, there will arise an anticipation in the Æquinoxes; and as *Junctinus* computeth, in every 136 year they will anticipate almost one day. And therefore those ancient Men and *Nestors* of old times, which yearly observed their nativities, might be mistaken in the day; nor that to be construed without a grain of Salt, which is delivered by *Moses*; *At the end of four hundred years, even the self same day, all the host of Israel went out of the land of Egypt.* For in that space of time the Æquinoxes had anticipated, and the eleven minutes had amounted far above a day. And this compute rightly considered will fall fouler on them who cast up the lives of Kingdoms, and sum up their duration by particular numbers; as *Plato* first began, and some have endeavoured since by perfect and spherical numbers, by the square and cube of 7 and 9 and 12, the great number of *Plato*. Wherein indeed *Bodine* hath attempted a particular enumeration; but (beside the mistakes committible in the solary compute of years) the difference of Chronology disturbs the satisfaction and quiet of his computes; some adding, others detracting, and few punctually according in any one year; whereby indeed such accounts should be made up; for the variation in an unite destroyes the total illation.

Comment. in Sphæram Joh. de Sacro bosco.

Mat. Histor.

Thirdly, The compute may be unjust, not only in a strict acception, of few daies or hours, but in the latitude also of some years; and this may happen from the different compute of years in divers Nations, and even such as did maintain the most probable way of account: their year being not only different from one another, but the civil and common account disagreeing much from the natural year, whereon the consideration is founded. Thus from the testimony of *Herodotus*, *Censorinus* and others, the *Greeks* observed the Lunary year, that is, twelve revolutions of the Moon, 354 daies; but the *Egyptians*, and many others adhered unto the Solary account, that is, 365 daies, that is, eleven daies longer. Now hereby the account of the one would very much exceed the other: A Man in the one would account himself 63, when one in the other would think himself but 61; and so although their nativities were under the same hour, yet did they at different years believe the verity of that which both esteemed affixed and certain unto one. The like mistake there is in a tradition of our daies; Men conceiving a peculiar danger in the beginning daies of *May*, set out as a fatal period unto Consumptions and Chronical diseases; wherein notwithstanding we compute by Calenders, not only different from our Ancestors, but one another; the compute of the one anticipating that of the other; so that while we are in *April*, others begin *May*, and the danger is past unto one, while it beginneth with another.

The Lunary Year what.

The Solary Year what.

Fourthly, Men were not only out in the number of some daies, the latitude of a few years, but might be wide by whole Olympiads and divers Decads of years. For as *Censorinus* relateth, the ancient *Arcadians* observed a year of three months, the *Carians* of six, the *Iberians* of four; and as *Diodorus* and *Xenophon de Æquivocis*, alledgeth, the ancient *Egyptians* have used a year of three, two, and one month: so that the Climacterical was not only different unto those Nations, but unreasonably distant from ours; for Sixty three will pass in their account, before they arrive so high as ten in ours.

The different account or measure of a Year.

Nor if we survey the account of *Rome* it self, may we doubt they were mistaken; and if they feared Climacterical years, might err in their numeration. For the civil year whereof the people took notice, did sometimes come short, and sometimes exceed the natural. For according to *Varro*, *Suetonius* and *Censorinus*, their year consisted first of ten months; which comprehended but 304 daies, that is, 61 less than ours containeth; after by *Numa* or *Tarquin*, from a superstitious conceit of imparity, were added 51 daies, which made 355, one day more than twelve revolutions of the Moon. And thus a long time it continued, the civil compute exceeding the Natural; the correction whereof, and the due ordering of the Leap-year was referred unto the *Pontifices*; who either upon favour

favour or malice, that some might continue their Offices a longer or shorter time: or from the magnitude of the year, that Men might be advantaged, or endamaged in their contracts, by arbitrary intercalations depraved the whole account. Of this abuse *Cicero* accused *Verres*, which at last proceeded so far, that when *Julius Cæsar* came unto that office, before the redress hereof he was fain to insert two intercalary months unto *November* and *December*, when he had already inserted 23 days unto *February*; so that the year consisted of 445 daies; a quarter of a year longer than that we observe; and though at the last the year was reformed, yet in the mean time they might be out wherein they summed up Climacterical observations.

Lastly, one way more there may be of mistake, and that not unusual among us, grounded upon a double compute of the year; the one beginning from the 25 of *March*, the other from the day of our birth, unto the same again, which is the Natural account. Now hereupon many Men frequently miscast their daies; for in their age they deduce the account not from the day of their birth, but the year of our Lord, wherein they were born. So a man that was born in *January* 1582, if he live to fall sick in the latter end of *March* 1645, will sum up his age, and say I am now Sixty three, and in my Climacterical and dangerous Year; for I was born in the year 1582, and now it is 1645, whereas indeed he wanteth many months of that year, considering the true and Natural account unto his birth; and accounteth two months for a year: and though the length of time and accumulation of years do render the mistake insensible; yet is it all one, as if one born in *January* 1644, should be accounted a year old the 25 of *March* 1645.

All which perpended, it may be easily perceived with what insecurity of truth we adhere unto this opinion; ascribing not only effects depending on the Natural period of time, unto arbitrary calculations, and such as vary at pleasure; but confirming our Tenets by the uncertain account of others and our selves. There being no positive or indisputable ground where to begin our compute; that if there were, Men have been several waies mistaken; the best in some latitude, others in greater, according to the different compute of divers States, the short and irreconcilable years of some, the exceeding error in the Natural frame of others, and the lapses and false deductions of ordinary Accountants in most.

Which duly considered, together with a strict account and critical examen of Reason, will also distract the witty determinations of Astrology. That *Saturn* the enemy of life, comes almost every seventh year, unto the quadrate or malevolent place; that as the Moon about every seventh day arriveth unto a contrary sign, so *Saturn*, which remaineth about as many years, as the Moon doth daies in one sign, and holdeth the same consideration in years as the Moon in daies; doth cause these periculous periods. Which together with other Planets, and profection of the Horoscope, unto the seventh house, or opposite signs every seventh year; oppresseth living Natures, and causeth observable mutations in the state of sublunary things.

Further satisfaction may yet be had from the learned discourse of *Salmasius* lately published, if any desire to be informed how different the present observations are from those of the Ancients; how every one hath different Climactericals; with many other observables, impugning the present opinion. *De annis Climactericis.*

CHAP.

CHAP. XIII.

Of the Canicular or Dog-daies.

WHereof to ſpeak diſtinctly: among the Southern Conſtellations two there are which bear the name of the Dog; the one in 16 degrees of latitude, containing on the left thigh a Star of the firſt magnitude, uſually called *Procyon* or *Anticanis*, becauſe ſay ſome it riſeth before the other; which if truly underſtood, muſt be reſtrained unto thoſe habitations, who have elevation of Pole above thirty two degrees. Mention thereof there is in *Horace*, who ſeems to miſtake or confound the one with the other; and after him in *Gaten*, who is willing, the remarkableſt Star of the other ſhould be called by this name; becauſe it is the firſt that ariſeth in the Conſtellation; which notwithſtanding, to ſpeak ſtrictly, it is not; unleſs we except one of the third magnitude in the right paw in his own and our elevation, and two more on his Head in and beyond the degree of Sixty. A ſecond and more conſiderable one there is, and neighbour unto the other, in 40 degrees of latitude, containing 18 Stars, whereof that in his mouth of the firſt magnitude, the *Greeks* call Σείριος, the *Latins canis major*, and we emphatically the Dog-ſtar.

Jam Procyon fuerit & ſtella vefani Leonis.

What the Dog-ſtar is

Now from the riſing of this Star, not coſmically, that is, with the Sun, but Heliacally, that is, its emerſion from the raies of the Sun, the Ancients computed their canicular dayes; concerning which there generally paſſeth an opinion, that during thoſe dayes, all medication or uſe of Phyſick is to be declined; and the cure committed unto Nature. And therefore as though there were any feriation in Nature or *juſtitiums* imaginable in Profeſſions, whoſe ſubject is Natural, and under no intermiſſive, but conſtant way of mutation; this ſeaſon is commonly termed the Phyſicians Vacation, and ſtands ſo received by moſt Men. Which conceit however general, is not only erroneous, but unnatural, and ſubſiſting upon foundations either falſe, uncertain, miſtaken or miſapplied, deſerves not of mankind that indubitable aſſent it findeth.

For firſt, which ſeems to be the ground of this aſſertion, and not to be drawn into queſtion, that is, the magnified quality of this Star conceived to cauſe, or intend the heat of this ſeaſon whereby theſe dayes become more obſervable than the reſt; We find that wiſer Antiquity was not of this opinion. For, ſeventeen hundred years ago it was as a vulgar Error rejected by *Geminus*, a learned Mathematician, in his Elements of Aſtronomy; wherein he plainly affirmeth, that common opinion made that a cauſe, which was at firſt obſerved but as a ſign. The riſing and ſetting both of this Star and others being obſerved by the Ancients, to denote and teſtifie certain points of mutation, rather than conceived to induce or effect the ſame. For our fore-fathers, ſaith he, obſerving the courſe of the Sun, and marking certain mutations to happen in his progreſs through particular parts of the Zodiack, they regiſtred and ſet them down in their Parapegmes, or Aſtronomical Canons; and being not able to deſign theſe times by days, months or years (the compute thereof, and the beginning of the year being different, according unto different Nations) they thought beſt to ſettle a general account unto all; and to determine theſe alterations by ſome known and invariable ſigns; and ſuch did they conceive the riſing and ſetting of the fixed Stars; not aſcribing thereto any part of cauſality, but notice and ſignification. And thus much ſeems implied in that expreſſion of *Homer*, when ſpeaking of the Dog-Star, he concludeth—— κακὸν δέ τε σῆμα τέτυκται, *Malum autem ſignum eſt*; The ſame, as *Petavius* obſerveth, is implied in the word of *Ptolomy*, and the Ancients, περὶ ἐπισημασιῶν, that is, of the ſignification of Stars. The term of Scripture alſo favours it,

ir, as that of *Isaiah*, *Nolite timere à signis cœli* and that in *Genesis*, *Ut sint in signa & tempora:* Let there be lights in the firmament, and let them be for signs and for seasons.

The Primitive and leading magnifiers of this Star, were the *Egyptians*, the great admirers of Dogs in Earth and Heaven. Wherein they worshipped *Anubis* or *Mercurius*, the Scribe of *Saturn*, and Counseller of *Osyris* the great inventor of their religious rites, and Promoter of good unto *Egypt*. Who was therefore translated into this Star; by the *Egyptians* called *Sothis*, and *Siris* by the *Ethiopians*; from whence that *Sirius* or the Dog-star had its name, is by some conjectured. *Dionysius Periegetes.*

And this they looked upon, not with reference unto heat, but cœlestial influence upon the faculties of Man, in order to religion and all sagacious invention; and from hence derived the abundance and great fertility of *Egypt*, the overflow of *Nilus* happening about the ascent hereof. And therefore in hieroglyphical monuments, *Anubis* is described with a Dogs-head, with a Crocodile between his legs, with a sphere in his Hand, with two Stars, and a water-Pot standing by him; implying thereby, the rising and setting of the Dog-star, and the inundation of the River *Nilus*.

But if all were silent, *Galen* hath explained this point unto the life; who expounding the reason why *Hippocrates* declared the affections of the year by the rising and setting of Stars; it was, saith he, because he would proceed on signs and principles best known unto all Nations. And upon his words in the first of the Epidemicks, *In Thaso Autumno circa Equinoctium & sub virgilias pluviæ erant multæ*, he thus enlargeth. If (saith he) the same compute of times and months were observed by all Nations, *Hippocrates* had never made any mention either of *Arcturus*, *Pleiades* or the Dog-star; but would have plainly said, in *Macedonia*, in the Month *Dion*, thus or thus was the air disposed. But for as much as the month *Dion* is only known unto the *Macedonians*, but obscure unto the *Athenians* and other Nations, he found more general distinctions of time, and instead of naming months, would usually say, at the Æquinox, the rising of the *Pleiades*, or the Dog-star. And by this way did the Ancients divide the seasons of the year, the Autumn, Winter, Spring, and Summer. By the rising of the *Pleiades*, denoting the beginning of Summer, and by that of the Dog-star, the declination thereof. By this way *Aristotle* through all his Books of Animals, distinguisheth their times of generation, latitancy, migration, sanity, and venation. And this were an allowable way of compute, and still to be retained, were the site of the Stars as inalterable, and their ascents as invariable as primitive Astronomy conceived them. And therefore though *Aristotle* frequently mentioneth this Star, and particularly affirmeth that Fishes in the *Bosphorus* are best catched from the arise of the Dog-star, we must not conceive the same a meer effect thereof. Nor though *Scaliger* from hence be willing to infer the efficacy of this Star, are we induced hereto; except because the same Philosopher affirmeth, that Tunny is fat about the rising of the *Pleiades*, and departs upon *Arcturus*, or that most Insects are latent from the setting of the 7 Stars; except, I say, he give us also leave to infer that these particular effects and alterations proceed from those Stars; which were indeed but designations of such quarters and portions of the year, wherein the same were observed. Now what *Pliny* affirmeth of the Orix, that it seemeth to adore this Star, and taketh notice thereof by voice and sternutation; until we be better assured of its verity, we shall not salve the Sympathy. How the Ancients divided the seasons of the year.

Secondly, What slender opinion the Ancients held of the efficacy of this Star, is declarable from their compute. For as *Geminus* affirmeth, and *Petavius* his learned Commentator proveth, they began their account from its Heliacal emersion, and not its Cosmical ascent. The *Cosmical* ascension of a Star we term that, when it ariseth together with the Sun, or the same degree of the Ecliptick wherein the Sun abideth: and that the * *Heliacal*, when a Star which before for the vicinity of the Sun, was not visible, What the Cosmical.

* What the Heliacal ascent of Stars is.

viſible, being further removed, beginneth to appear. For the annual motion of the Sun from Weſt to Eaſt being far ſwifter than that of the fixed Stars, he muſt of neceſſity leave them on the Eaſt while he haſteneth forward, and obſcureth others to the Weſt: and ſo the Moon which performs its motion ſwifter than the Sun (as may be obſerved in their Conjunctions and Eclipſes) gets Eaſtward out of his raies; and appears when the Sun is ſet. If therefore the Dog-ſtar had this effectual heat which is aſcribed unto it, it would afford beſt evidence thereof, and the ſeaſon would be moſt fervent, when it ariſeth in the probableſt place of its activity, that is, the coſmical aſcent; for therein it ariſeth with the Sun, and is included in the ſame irradiation. But the time obſerved by the Ancients was long after this aſcent, and in the Heliacal emerſion; when it becomes at greateſt diſtance from the Sun, neither riſing with it nor near it. And therefore had they conceived any more than a bare ſignality in this Star, or aſcribed the heat of the Seaſon thereunto; they would not have computed from its Heliacal aſcent, which was of inferior efficacy; nor imputed the vehemency of heat unto thoſe points wherein it was more remiſs, and where with leſs probability they might make out its action.

Thirdly, Although we derive the authority of theſe dayes from obſervations of the Ancients, yet are our computes very different, and ſuch as confirm not each other. For whereas they obſerved it Heliacally, we ſeem to obſerve it Coſmically; for before it ariſeth Heliacally unto our latitude, the Summer is even at an end. Again, we compute not only from different aſcents, but alſo from divers Stars; they from the greater Dog-ſtar, we from the leſſer; they from *Orion*'s, we from *Cephalus* his Dog; they from *Seirius*, we from *Crocyon*; for the beginning of the Dog-dayes with us is ſet down the 19 of *July*, about which time the leſſer Dog-ſtar ariſeth with the Sun; whereas the Star of the greater Dog aſcendeth not until after that Month. And this miſtake will yet be larger, if the compute be made ſtricter, and as Dr. *Bainbrigge* late Profeſſor of Aſtronomy in *Oxford*, hath ſet it down. Who in the year 1629 computed that in the Horizon of *Oxford*, the Dog-ſtar aroſe not before the fifteenth day of *Auguſt*; when in our Almanack accounts, thoſe dayes are almoſt ended. So that the common and received time not anſwering the true compute, it fruſtrates the obſervations of our ſelves. And being alſo different from the calculations of the Ancients, their obſervations confirm not ours, nor ours theirs, but rather confute each other.

Bainb. Canicularis.

Nor will the computes of the Ancients be ſo Authentick unto thoſe, who ſhall take notice, how commonly they applied the celeſtial deſcriptions of other Climes unto their own; wherein the learned *Bainbrigius* juſtly reprehendeth *Manilius*, who transferred the *Egyptian* deſcriptions unto the *Roman* account; confounding the obſervation of the *Greek* and *Barbarick* Spheres.

Fourthly, (which is the Argument of *Geminus*) were there any ſuch effectual heat in this Star, yet could it but weakly evidence the ſame in Summer; it being about 40 degrees diſtant from the Sun; and ſhould rather manifeſt its warming power in the Winter, when it remains conjoyned with the Sun in its Hybernal converſion. For about the 29 of *October*, and in the 16 of *Scorpius*, and ſo again in *January*, the Sun performs his revolution in the ſame parallel with the Dog-ſtar. Again, If we ſhould impute the heat of this ſeaſon, unto the co-operation of any Stars with the Sun; it ſeems more favourable for our times, to aſcribe the ſame unto the Conſtellation of *Leo*. Where beſides that the Sun is in his proper Houſe, it is conjoyned with many Stars; whereof two of the firſt magnitude; and in the 8th. of *Auguſt* is corporally conjoyned with *Baſiliſcus* a Star of eminent name in Aſtrology, and ſeated almoſt in the Ecliptick.

Fifthly, If all were granted, that obſervation and reaſon were alſo for it, and were it an undeniable truth, that an effectual fervour proceeded from this Star; yet would not the ſame determine the opinion now in queſtion; it neceſſarily

neceſſarily ſuffering ſuch reſtrictions as take off general illations. For firſt in regard of different latitudes, unto ſome the canicular dayes are in the Winter; as unto ſuch as have no latitude, but live in a right Sphere, that is, under the Equinoctial Line; for unto them it ariſeth when the Sun is about the Tropick of *Cancer*; which ſeaſon unto them is Winter, and the Sun remoteſt from them. Nor hath the ſame Poſition in the Summer, that is, in the Equinoctial points, any advantage from it; for in the one point the Sun is at the Meridian, before the Dog-ſtar ariſeth; in the other the Star is at the Meridian, before the Sun aſcendeth.

What Latitudes have no Dog-dayes at all.

Some Latitudes have no canicular dayes at all; as namely all thoſe which have more than 73 degrees of Northern Elevation; as the Territory of *Nova Zembla*, part of *Greenland* and *Tartary*; for unto that habitation the Dog-ſtar is inviſible, and appeareth not above the Horizon.

Unto ſuch latitudes wherein it ariſeth, it carrieth a various and very different reſpect; unto ſome it aſcendeth when Summer is over, whether we compute Heliacally or Coſmically; for though unto *Alexandria* it ariſeth in *Cancer*; yet it ariſeth not unto *Biarmia* Coſmically before it be in *Virgo*, and Heliacally about the Autumnal Æquinox. Even unto the latitude of 52, the efficacy thereof is not much conſiderable, whether we conſider its Aſcent, Meridian, Altitude, or abode above the Horizon. For it ariſeth very late in the year, about the eighteenth of *Leo*, that is, the 31 of *July*. Of Meridian Altitude it hath but 23 degrees, ſo that it playes but obliquely upon us, and as the Sun doth about the 23 of *January*. And laſtly, his abode above the Horizon is not great; for in the eighteenth of *Leo*, the 31 of *July*, although they ariſe together; yet doth it ſet above 5 hours before the Sun, that is, before two of the Clock, after which time we are more ſenſible of heat, than all the day before.

What the Longitude of a Star is.

Secondly, In regard of the variation of the longitude of the Stars, we are to conſider (what the Ancients obſerved not) that the ſite of the fixed Stars is alterable, and that ſince elder times they have ſuffered a large and conſiderable variation of their longitudes. The Longitude of a Star, to ſpeak plainly, is its diſtance from the firſt point of numeration toward the Eaſt; which firſt point unto the Ancients was the Vernal Æquinox. Now by reaſon of their motion from Weſt to Eaſt, they have very much varied from this point: The firſt Star of *Aries* in the time of *Meton* the *Athenian* was placed in the very interſection, which is now elongated and removed Eaſtward 28 degrees; inſomuch that now the Sign of *Aries* poſſeſſeth the place of *Taurus*, and *Taurus* that of *Gemini*. Which variation of longitude muſt very much diſtract the opinion of the Dog-ſtar; not only in our dayes, but in times before and after; for ſince the World began it hath ariſen in *Taurus*, and if the World laſt, may have its aſcent in *Virgo*; ſo that we muſt place the Canicular dayes, that is, the hotteſt time of the year in the Spring in the firſt Age, and in the Autumn in Ages to come.

What the Declination of a Star is.

Thirdly, The Stars have not only varied their longitudes, whereby their aſcents have altered; but have alſo changed their Declinations, whereby their riſing at all, that is, their appearing hath varied. The Declination of a Star we call its diſtance from the Æquator. Now though the Poles of the World and the Æquator be immovable; yet becauſe the Stars in their proper motions from Weſt to Eaſt, do move upon the Poles of the Ecliptick, diſtant 23 degrees and an half from the Poles of the Æquator, and deſcribes Circles parallel not unto the Æquator, but the Ecliptick; they muſt be therefore ſometimes nearer, ſometimes removed further from the Æquator. All Stars that have their diſtance from the Ecliptick Northward not more than 23 degrees and an half (which is the greateſt diſtance of the Ecliptick from the Æquator) may in progreſſion of time have declination Southward, and move beyond the Æquator: but if any Star hath juſt this diſtance of 23 and an half (as hath *Capella* on the back of *Erichthonius*) it may hereafter move under the Equinoctial; and the ſame will happen reſpectively unto Stars which have declination Southward.

And therefore many Stars may be visible in our Hemisphere, which are not so at present; and many which are at present, shall take leave of our Horizon, and appear unto Southern habitations. And therefore the time may come, that the Dog-star may not be visible in our Horizon, and the time hath been, when it hath not shewed it self unto our neighbour latitudes So that canicular dayes there have been none, nor shall be; yet certainly in all times some season of the year more notably hot than other.

Why the Dog-dayes be so hot.

Lastly, We multiply causes in vain; and for the reason hereof, we need not have recourse unto any Star but the Sun, and continuity of its action. For the Sun ascending into the Northern Signs, begetteth first a temperate heat in the Air; which by his approach unto the Solstice he intendeth; and by continuation increaseth the same even upon declination. For running over the same degrees again, that is, in *Leo*, which he hath done in *Taurus*, in *July* which he did in *May*; he augmenteth the heat in the latter which he began in the first; and easily intendeth the same by continuation which was well promoted before. So is it observed, that they which dwell between the Tropicks and the Æquator, have their second Summer hotter and more maturative of fruits than the former. So we observe in the day (which is a short year) the greatest heat about two in the afternoon, when the Sun is past the Meridian (which is his diurnal Solstice) and the same is evident from the Thermometer or observations of the Weather-glass. So are the colds of the night sharper in the Summer about two or three after midnight, and the Frosts in Winter stronger about those hours. So likewise in the year we observe the cold to augment, when the dayes begin to increase, though the Sun be then ascensive, and returning from the Winter Tropick. And therefore if we rest not in this reason for the heat in the declining part of Summer, we must discover freezing Stars that may resolve the latter colds of Winter; which whoever desires to invent, let him study the Stars of *Andromeda*, or the nearer Constellation of *Pegasus*, which are about that time ascendant.

It cannot therefore seem strange, or savour of singularity, that we have examined this point, since the same hath been already denyed by some, since the authority and observations of the Ancients rightly understood, do not confirm it; since our present computes are different from those of the Ancients, whereon notwithstanding they depend; since there is reason against it, and if all were granted, yet must it be maintained with manifold restraints, far otherwise than is received. And lastly, since from plain and natural Principles, the doubt may be fairly salved, and not clapt up from petitionary Foundations and Principles unestablished.

Qui nec fallere potest, nec fallit.

But that which chiefly promoted the consideration of these dayes, and medically advanced the same, was the Doctrine of *Hippocrates*; a Physician of such repute, that he received a testimony from a Christian, that might have been given unto Christ. The first in his Book *de Aere, Aquis, & locis. Syderum ortus, &c.* That is, we are to observe the rising of Stars, especially the Dog-star, *Arcturus*, and the setting of the *Pleiades* or seven Stars. From whence notwithstanding we cannot infer the general efficacy of these Stars, or co-efficacy particular in medications. Probably expressing no more hereby, than if he should have plainly said, especial notice we are to take of the hottest time in Summer, of the beginning of Autumn and Winter; for by the rising and setting of those Stars were these times and seasons defined. And therefore subjoyns this reason, *Quoniam his temporibus morbi finiuntur*, because at these times Diseases have their ends, as Physicians well know, and he elsewhere affirmeth, that seasons determine Diseases, beginning in their contraries; as the Spring the Diseases of Autumn, and the Summer those of Winter. Now (what is very remarkable) whereas in the same place he adviseth to observe the times of notable mutations, as the Equinoxes, and the Solstices, and to decline Medication ten dayes before and after; how precisely soever canicular cautions be considered, this is not observed by Physicians, nor taken notice of by the people And indeed should we blindly obey the restraints both of Physicians and Astrologers,

Diseases commonly determined, by what seasons.

logers, we ſhould contract the liberty of our preſcriptions, and confine the utility of Phyſick unto a very few dayes. For obſerving the Dog-dayes, and as is expreſſed, ſome dayes before, likewiſe ten dayes before and after the Equinoctial and Solſtitial points: by this obſervation alone are exempted an hundred dayes. Whereunto if we add the two *Egyptian* dayes in every Month, the interlunary and plenilunary exemptions, the Eclipſes of Sun and Moon, Conjunctions and Oppoſitions Planetical, the houſes of Planets, and the ſite of the Luminaries under the Signs (wherein ſome would induce a reſtraint of Purgation or Phlebotomy) there would ariſe above an hundred more; ſo that of the whole year the uſe of Phyſick would not be ſecure much above a quarter. Now as we do not ſtrictly obſerve theſe dayes, ſo need we not the other; and although conſideration be made hereof, yet muſt we prefer the nearer indication before thoſe which are drawn from the time of the year, or other celeſtial relations.

The ſecond Teſtimony is taken out of the laſt piece of his Age, and after the experience (as ſome think) of no leſs than an hundred years, that is, his Book of Aphoriſms, or ſhort and definitive Determinations in Phyſick. The Aphoriſm alledged is this, *Sub Cane & ante Canem difficiles ſunt purgationes. Sub Cane & Anticane*, ſay ſome, including both the Dog-ſtars; but that cannot conſiſt with the Greek, ὑπὸ κύνα καὶ πρὸ κυνὸς, nor had that Criticiſm been ever omitted by *Galen*. Now how true this ſentence was in the mouth of *Hippocrates*, and with what reſtraint it muſt be underſtood by us, will readily appear from the difference between us both, in circumſtantial relations.

When *Hippocrates* lived.

And firſt, Concerning his time and Chronology: he lived in the Reign of *Artaxerxes Longimanus*, about the 82. Olympiad, 450. years before Chriſt; and from our times above two thouſand. Now ſince that time (as we have already declared) the Stars have varied their longitudes; and having made large progreſſions from Weſt to Eaſt, the time of the Dog-ſtars aſcent muſt alſo very much alter. For it ariſeth later now in the year, than it formerly did in the ſame latitude; and far later unto us who have a greater elevation; for in the dayes of *Hippocrates* this Star aſcended in *Cancer*, which now ariſeth in *Leo*; and will in progreſſion of time ariſe in *Virgo*. And therefore in regard of the time wherein he lived, the Aphoriſm was more conſiderable in his dayes than in ours, and in times far paſt than preſent, and in his Countrey than ours.

The place of his Nativity was *Coos*, an Iſland in the *Myrtoan* Sea, not far from *Rhodes*, deſcribed in Maps by the name of *Lango*, and called by the *Turks*, who are Maſters thereof, *Stancora*; according unto *Ptolomy*, of Northern latitude 36. degrees. That he lived and writ in theſe parts, is not improbably collected from the Epiſtles that paſſed betwixt him and *Artaxerxes*; as alſo between the Citizens of *Abdera*, and *Coos*, in the behalf of *Democritus*. Which place being ſeated from our latitude of 53. 16 degrees Southward, there will ariſe a different conſideration; and we may much deceive our ſelves, if we conform the aſcent of Stars in one place unto another, or conceive they ariſe the ſame day of the Month in *Coos* and in *England*. For as *Petavius* computes in the firſt *Julian* year, at *Alexandria* of latitude 31, the Star aroſe Coſmically in the twelfth degree of *Cancer*, Heliacally the 26. by the compute of *Geminus* about this time at *Rhodes* of latitude 37. it aſcended Coſmically the 16. of *Cancer*, Heliacally the firſt of *Leo*; and about that time at *Rome* of latitude 42. Coſmically the 22. of *Cancer*, and Heliacally the firſt of *Leo*. For unto places of greater latitude it ariſeth ever later; ſo that in ſome latitudes the Coſmical aſcent happeneth not before the twentieth degree of *Virgo*, ten dayes before the Autumnal Equinox, and if they compute Heliacally, after it, in *Libra*.

Again, Should we allow all, and only compute unto the latitude of *Coos*; yet would it not impoſe a total omiſſion of Phyſick. For if in the hotteſt ſeaſon of that Clime, all Phyſick were to be declined, then ſurely in many

other none were to be used at any time whatsoever; for unto many parts, not only in the Spring and Autumn, but also in the Winter, the Sun is nearer, than unto the Clime of *Coos* in the Summer.

Three degrees of purgations.

The third consideration concerneth purging Medicines, which are at present far different from those implied in this Aphorism, and such as were commonly used by *Hippocrates*. For three degrees we make of purgative Medicines: The first thereof is very benign, not far removed from the nature of Aliment, into which, upon defect of working, it is oft-times converted; and in this form do we account *Manna*, *Cassia*, *Tamarinds*, and many more; whereof we find no mention in *Hippocrates*. The second is also gentle, having a familiarity with some humour, into which it is but converted if it fail of its operation: of this sort are *Aloe*, *Rhabarb*, *Senna*, *&c.* Whereof also few or none were known unto *Hippocrates*. The third is of a violent and venemous quality, which frustrate of its action, assumes as it were the nature of poison; such are *Scammoneum*, *Colocynthis*, *Elaterium*, *Euphorbium*, *Tithymallus*, *Laureola*, *Peplum*, *&c.* Of this sort *Hippocrates* made use even in Fevers, Pleurisies and Quinsies; and that composition is very remarkable which is ascribed unto *Diogenes* in *Ætius*; that is, of *Pepper*, *Sal-Armoniac*, *Euphorbium*, of each an ounce, the *Dosis* whereof four scruples and an half; which whosoever should take, would find in his bowels more than a canicular heat, though in the depth of Winter. Many of the like nature may be observed in *Ætius*, or in the Book *De Dinamidiis*, ascribed unto *Galen*, which is the same *verbatim* with the other.

Tetrab. lib. 1. Serm. 3.

Now in regard of the second, and especially the first degree of Purgatives, the Aphorism is not of force; but we may safely use them, they being benign and of innoxious qualities. And therefore *Lucas Gauricus*, who hath endeavoured with many testimonies to advance this consideration, at length concedeth, that lenitive Physick may be used, especially when the Moon is well affected in *Cancer*, or in the watery Signs. But in regard of the third degree, the Aphorism is considerable; purgations may be dangerous; and a memorable example there is in the Medical Epistles of *Crucius*, of a *Roman* Prince that died upon an ounce of *Diaphœnicon*, taken in this season. From the use whereof we refrain not only in hot seasons, but warily exhibit it at all times in hot Diseases. Which when necessity requires, we can perform more safely than the Ancients, as having better wayes of preparation and correction; that is, not only by addition of other bodies, but separation of noxious parts from their own.

But beside these differences between *Hippocrates* and us, the Physicians of these times and those of Antiquity; the condition of the Disease, and the intention of the Physician, hold a main consideration in what time and place soever. For Physick is either curative, or preventive; Preventive we call that which by purging noxious humors, and the causes of Diseases, preventeth sickness in the healthy, or the recourse thereof in the valetudinary; this is of common use at the Spring and Fall, and we commend not the same at this season. Therapeutick or curative Physick, we term that, which restoreth the Patient unto Sanity, and taketh away Diseases actually affecting. Now of Diseases some are chronical and of long duration, as Quartan Agues, Scurvy, *&c.* Wherein because they admit of delay, we defer the cure to more advantagious seasons: Others we term acute, that is, of short duration and danger, as Fevers, Pleurisies, *&c.* In which, because delay is dangerous, and they arise unto their state before the Dog-dayes determine; we apply present remedies according unto Indications; respecting rather the acuteness of the Disease, and precipitancy of occasion, than the rising or setting of the Stars; the effects of the one being disputable, of the other assured and inevitable.

Diseases Chronical and Acute what they be.

Strong purgations not so well given in the heat of Summer, and why.

And although Astrology may here put in, and plead the secret influence of this Star; yet *Galen* in his Comment, makes no such consideration; confirming the truth of the Aphorism from the heat of the year, and the operation of Medicines exhibited. In regard that bodies being heated

heated by the Summer, cannot ſo well endure the acrimony of purging Medicines; and becauſe upon Purgations contrary motions enſue, the heat of the Air attracting the humours outward, and the action of the Medicine retracting the ſame inward. But theſe are readily ſalved in the diſtinctions before alledged; and particularly in the conſtitution of our Climate and divers others, wherein the Air makes no ſuch exhauſtion of ſpirits. And in the benignity of our Medicines; whereof ſome in their own nature, others well prepared, agitate not the humors, or make a ſenſible perturbation.

Nor do we hereby reject or condemn a ſober and regulated Aſtrology; we hold there is more truth therein, than in Aſtrologers; in ſome more than many allow, yet in none ſo much as ſome pretend. We deny not the influence of the Stars, but often ſuſpect the due application thereof; for though we ſhould affirm, that all things were in all things, that Heaven were but Earth celeſtified, and Earth but Heaven terreſtrified, or that each part above had an influence upon its divided affinity below; yet how to ſingle out theſe relations, and duly to apply their actions, is a work oft-times to be effected by ſome revelation, and *Cabala* from above, rather than any Philoſophy, or ſpeculation here below. What power ſoever they have upon our bodies, it is not requiſite they ſhould deſtroy our Reaſons, that is, to make us rely on the ſtrength of Nature, when ſhe is leaſt able to relieve us; and when we conceive the Heaven againſt us, to refuſe the aſſiſtance of the Earth created for us. This were to ſuffer from the mouth of the Dog above, what others do from the teeth of the Dogs below; that is, to be afraid of their proper remedy, and refuſe to approach any Water; though that hath often proved a Cure unto their Diſeaſe. There is in wiſe men a power beyond the Stars; and *Ptolomy* encourageth us, that by foreknowledge, we may evade their actions; for, being but univerſal Cauſes, they are determined by particular Agents; which being inclined, not conſtrained, contain within themſelves the caſting act, and a power to command the concluſion.

A Problem.

Upon the biting of a mad Dog there enſues an *hydrophobia* or fear of Water.

Laſtly, If all be conceded, and were there in this Aphoriſm an unreſtrained truth, yet were it not reaſonable from a caution to infer a nonuſance or abolition, from a thing to be uſed with diſcretion, not to be uſed at all. Becauſe the Apoſtle bids us beware of Philoſophy, heads of extremity will have none at all; an uſual fallacy in vulgar and leſs diſtinctive Brains, who having once overſhot the mean, run violently on, and find no reſt, but in the extreams.

Now hereon we have the longer inſiſted, becauſe the Error is material, and concerns oft-times the life of man; an error to be taken notice of by State, and provided againſt by Princes, who are of the opinion of *Solomon*, that their riches conſiſt in the multitude of their Subjects. An error worſe than ſome reputed *Hereſies*; and of greater danger to the body, than they unto the ſoul; which whoſoever is able to reclaim, he ſhall ſave more in one Summer, than * *Themiſon* deſtroyed in any Autumn; he ſhall introduce a new way of cure, preſerving by Theory, as well as Practice, and men not only from death, but from deſtroying themſelves.

* A Phyſician, *Quot Themiſon ægros Autumno occiderit uno.* Juvenal.

THE

THE FIFTH BOOK.

Of many things queſtionable as they are commonly deſcribed in Pictures.

CHAP. I.

Of the Picture of the Pelican.

AND firſt in every place we meet with the Picture of the Pelican, opening her Breaſt with her Bill, and feeding her young ones with the blood diſtilled from her. Thus is it ſet forth not only in common Signs, but in the Creſt and Scutcheon of many Noble Families; hath been aſſerted by many holy Writers, and was an Hieroglyphick of Piety and Pity among the *Ægyptians*; on which conſideration they ſpared them at their Tables.

Notwithſtanding upon enquiry we find no mention hereof in Ancient Zoographers, and ſuch as have particularly diſcourſed upon Animals, as *Ariſtotle*, *Ælian*, *Pliny*, *Solinus*, and many more; who ſeldom forget proprieties of ſuch a nature, and have been very punctual in leſs conſiderable Records. Some ground hereof I confeſs we may allow, nor need we deny a remarkable affection in Pelicans toward their young; for *Ælian* diſcourſing of Storks, and their affection toward their brood, whom they inſtruct to fly, and unto whom they re-deliver up the proviſion of their Bellies, concludeth at laſt, that Herons and Pelicans do the like.

As for the Teſtimonies of Ancient Fathers, and Eccleſiaſtical Writers, we may more ſafely conceive therein ſome Emblematical, than any real Story: ſo doth *Eucherius* confeſs it to be the Emblem of Chriſt. And we are unwilling literally to receive that account of *Jerom*, that perceiving her young ones deſtroyed by Serpents, ſhe openeth her ſide with her Bill, by the blood whereof

whereof they revive and return unto life again. By which relation they might indeed illuſtrate the deſtruction of Man by the old Serpent, and his reſtorement by the Blood of Chriſt: and in this ſenſe we ſhall not diſpute the like relations of *Auſtin*, *Iſidore*, *Albertus*, and many more; and under an Emblematical intention, we accept it in coat-armour.

As for the Hieroglyphick of the *Egyptians*, they erected the ſame upon another conſideration, which was parental affection; manifeſted in the protection of her young ones, when her Neſt was ſet on fire. For as for letting out her blood, it was not the aſſertion of the *Egyptians*, but ſeems tranſlated unto the Pelican from the Vultur, as *Pierius* hath plainly delivered. *Sed quod Pelicanum (ut etiam aliis pleriſque perſuaſum eſt) roſtro pectus diſſecantem pingunt, ita ut ſuo ſanguine filios alat, ab Ægyptiorum hiſtoria valde alienum eſt, illi enim Vulturem tantùm id facere tradiderunt.*

And laſtly, As concerning the picture, if naturally examined, and not Hieroglyphically conceived, it containeth many improprieties, diſagreeing almoſt in all things from the true and proper deſcription. For, whereas it is commonly ſet forth green or yellow, in its proper colour it is inclining to white; excepting the extremities or tops of the wing feathers, which are brown. It is deſcribed in the bigneſs of a Hen, whereas it approacheth and ſometimes exceedeth the magnitude of a Swan. It is commonly painted with a ſhort Bill; whereas that of the Pelican attaineth ſometimes the length of two ſpans. The Bill is made acute or pointed at the end; whereas it is flat and broad, though ſomewhat inverted at the extream. It is deſcribed like *fiſſipedes*, or Birds which have their feet or claws divided; whereas it is palmipedous, or fin-footed like Swans and Geeſe; according to the method of Nature, in latiroſtrous or flat-bil'd Birds; which being generally ſwimmers, the organ is wiſely contrived unto the action, and they are framed with fins or oars upon their feet; and therefore they neither light, nor build on Trees, if we except Cormorants, who make their Neſts like Herons. Laſtly, there is one part omitted more remarkable than any other; that is, the Chowle or Crop adhering unto the lower ſide of the Bill, and ſo deſcending by the Throat: a Bag or Satchel very obſervable, and of a capacity almoſt beyond credit; which notwithſtanding, this Animal could not want; for therein it receiveth Oyſters, Cockles, Scollops, and other teſtaceous Animals; which being not able to break; it retains them until they open, and vomiting them up, takes out the meat contained. This is that part preſerved for a rarity, and wherein (as *Sanctius* delivers) in one diſſected, a *Negro* child was found.

The bigneſs of a Pelican.

Of her Crop.

A poſſibility there may be of opening and bleeding their breaſt; for this may be done by the uncous and pointed extremity of their Bill: and ſome probability alſo that they ſometimes do it, for their own relief, though not for their young ones; that is, by nibling and biting themſelves on their itching part of their Breaſt, upon fulneſs or acrimony of blood. And the ſame may be better made out; if (as ſome relate) their feathers on that part are ſometimes obſerved to be red and tinctured with blood.

CHAP. II.

Of the Picture of Dolphins.

THat Dolphins are crooked, is not only affirmed by the hand of the Painter, but commonly conceived their natural and proper figure; which is not only the opinion of our times, but ſeems the belief of elder times before us. For, beſide the expreſſions of *Ovid* and *Pliny*, the Pourtraicts in ſome ancient Coyns are framed in this Figure, as will appear in ſome thereof in *Geſner*, others in *Goltſius*, and *Lævinus Hulſius* in his deſcription of Coyns, from *Julius Cæſar* unto *Rodulphus* the ſecond.

Notwithſtanding,

Notwithstanding, to speak strictly, in their natural figure they are streight, nor have their spine convexed, or more considerably embowed, than Sharks, Porpoises, Whales, and other Cetaceous Animals, as *Scaliger* plainly affirmeth: *Corpus habet non magis curvum quàm reliqui pisces.* As ocular enquiry informeth; and as, unto such as have not had the opportunity to behold them, their proper Pourtraicts will discover in *Rondeletius*, *Gesner*, and *Aldrovandus*. And as indeed is deducible from Pictures themselves; for though they be drawn repandous, or convexedly crooked in one piece, yet the Dolphin that carrieth *Arion* is concavously inverted, and hath its spine depressed in another. And answerably hereunto may we behold them differently bowed in Medals, and the Dolphins of *Tarus* and *Fulius* do make another flexure from that of *Commodus* and *Agrippa*.

And therefore what is delivered of their incurvity, must either be taken Emphatically, that is, not really but in appearance; which happeneth, when they leap above Water, and suddenly shoot down again; which is a fallacy in vision, whereby straight bodies in a sudden motion protruded obliquely downward, appear unto the eye crooked; and this is the construction of *Bellonius*: Or if it be taken really, it must not universally and perpetually; that is, not when they swim and remain in their proper figures, but only when they leap, or impetuously whirl their bodies any way; and this is the opinion of *Gesnerus*. Or lastly, It may be taken neither really nor emphatically, but only Emblematically: for being the Hieroglyphick of Celerity, and swifter than other Animals, men best expressed their velocity by incurvity, and under some figure of a Bow: and in this sense probably do Heralds also receive it, when from a Dolphin extended, they distinguish a Dolphin embowed.

And thus also must that Picture be taken of a Dolphin clasping an Anchor: that is, not really, as is by most conceived out of affection unto man, conveighing the Anchor unto the ground: but emblematically, according as *Pierius* hath expressed it, The swiftest Animal conjoyned with that heavy body, implying that common Moral, *Festina lentè*: and that celerity should alwayes be contempered with cunctation.

CHAP. III.

Of the Picture of a Grasshopper.

THere is also among us a common description and picture of a Grasshopper, as may be observed in the pictures of Emblematists, in the Coats of several Families, and as the word *Cicada* is usually translated in Dictionaries. Wherein to speak strictly, if by this word Grasshopper, we understand that Animal which is implyed by τέττιξ with the *Greeks*, and by *Cicada* with the *Latines*; we may with safety affirm the Picture is widely mistaken, and that for ought enquiry can inform, there is no such Insect in *England*. Which how paradoxical soever, upon a strict enquiry, will prove undenyable truth.

For first, That Animal which the *French* term *Sauterelle*, we a Grasshopper, and which under this name is commonly described by us, is named Ἀκρὶς by the *Greeks*, by the *Latines Locusta*, and by our selves in proper speech a Locust; as in the diet of *John Baptist*, and in our Translation, *The Locusts have no King, yet go they forth all of them by bands.* Proverbs 30. Again, Between the *Cicada* and that we call a Grasshopper, the differences are very many, as may be observed in themselves, or their descriptions in *Matthiolus*, *Aldrovandus* and *Muffetus*. For first, They are differently cucullated or capuched upon the head and back, and in the *Cicada* the eyes are more prominent: the Locusts have *Antennæ* or long horns before, with a long falcation or forcipated tail behind; & being ordained for saltation, their hinder legs do far exceed the other.

The

The Locuſt or our Graſhopper hath teeth, the *Cicada* none at all; nor any mouth according unto *Ariſtotle*: the *Cicada* is moſt upon Trees; and laſtly, the *fritinnitus* or proper note thereof, is far more ſhrill than that of the Locuſt; and its life ſo ſhort in Summer, that for proviſion it needs not have recourſe unto the providence of the Piſmire in Winter.

And therefore where the *Cicada* muſt be underſtood, the pictures of Heralds and Emblematiſts are not exact, nor is it ſafe to adhere unto the interpretation of Dictionaries; and we muſt with candour make out our own Tranſlations: for in the Plague of *Ægypt*, *Exodus* 10. the word Ἀκρὶς is tranſlated a Locuſt, but in the ſame ſenſe and ſubject, *Wiſdom* 16. it is tranſlated a Graſhopper; *For them the bitings of Graſhoppers and flies killed:* whereas we have declared before, the *Cicada* hath no teeth, but is conceived to live upon dew; and the poſſibility of its ſubſiſtence is diſputed by *Licetus*. Hereof I perceive *Muffetus* hath taken notice, diſſenting from *Langius* and *Lycoſthenes*, while they deliver, the *Cicada's* deſtroyed the fruits in *Germany*, where that inſect is not found; and therefore concludeth, *Tam ipſos quàm alios deceptos fuiſſe autumo, dum locuſtas cicadas eſſe vulgari errore crederent.*

And hereby there may be ſome miſtake in the due diſpenſation of Medicines deſumed from this animal; particularly of *Diatettigon* commended by *Ætius* in the affections of the Kidnies. It muſt be likewiſe underſtood with ſome reſtriction what hath been affirmed by *Iſidore*, and yet delivered by many, that Cicades are bred out of Cuckow-ſpittle or Woodſear; that is, that ſpumous, frothy dew or exudation, or both, found upon Plants, eſpecially about the joints of Lavender and Roſemary, obſervable with us about the latter end of *May*. For here the true *Cicada* is not bred; but certain it is, that out of this, ſome kind of Locuſt doth proceed; for herein may be diſcovered a little inſect of a feſtucine or pale green, reſembling in all parts a Locuſt, or what we call a Graſhopper.

Laſtly, The word it ſelf is improper, and the term of Graſhopper not appliable unto the *Cicada*; for therein the organs of motion are not contrived for ſaltation, nor are the hinder legs of ſuch extenſion, as is obſervable in ſalient animals, and ſuch as move by leaping. Whereto the Locuſt is very well conformed; for therein the legs behind are longer than all the body, and make at the ſecond joynt acute angles, at a conſiderable advancement above their backs.

The miſtake therefore with us might have its original from a defect in our language; for having not the inſect with us, we have not fallen upon its proper name, and ſo make uſe of a term common unto it and the Locuſt; whereas other Countries have proper expreſſions for it. So the *Italian* calls it *Cicada*, the *Spaniard Cigarra*, and the *French Cigale*; all which appellations conform unto the original, and properly expreſs this animal. Whereas our word is borrowed from the Saxon Gærſthopp, which our forefathers, who never beheld the *Cicada*, uſed for that inſect which we yet call a Graſhopper.

CHAP. IV.

Of the Picture of the Serpent tempting Eve.

IN the Picture of Paradiſe, and deluſion of our firſt Parents, the Serpent is often deſcribed with humane viſage; not unlike unto *Cadmus* or his wife, in the act of their Metamorphoſis. Which is not a meer pictorial contrivance or invention of the Picturer, but an ancient tradition and conceived reality, as it ſtands delivered by *Beda* and Authors of ſome antiquity; that is, that Sathan appeared not unto *Eve* in the naked form of a Serpent, but with a Virgins head, that thereby he might become more acceptable, and his temptation

find the easier entertainment. Which nevertheless is a conceit not to be admitted, and the plain and received figure, is with better reason embraced.

For first, as *Pierius* observeth from *Barcephas*, the assumption of humane shape had proved a disadvantage unto Sathan; affording not only a suspicious amazement in *Eve*, before the fact, in beholding a third humanity beside her self and *Adam*; but leaving some excuse unto the Woman, which afterward the man took up with lesser reason; that is, to have been deceived by another like her self.

Again, There was no inconvenience in the shape assumed, or any considerable impediment that it might disturb that performance in the common form of a Serpent. For whereas it is conceived the woman must needs be afraid thereof, and rather flie than approach it; it was not agreeable unto the condition of Paradise and state of innocency therein; if in that place, as most determine, no creature was hurtful or terrible unto man, and those destructive effects they now discover succeeded the curse, and came in with thorns and briars. And therefore *Engubinus* (who affirmeth this Serpent was a Basilisk) incurreth no absurdity, nor need we infer that *Eve* should be destroyed immediately upon that Vision. For noxious animals could offend them no more in the Garden, than *Noah* in the Ark: as they peaceably received their names, so they friendly possessed their natures: and were their conditions destructive unto each other, they were not so unto man, whose constitutions then were antidotes, and needed not fear poisons. And if (as most conceive) there were but two created of every kind, they could not at that time destroy either man or themselves; for this had frustrated the command of multiplication, destroyed a species, and imperfected the Creation. And therefore also if *Cain* were the first man born, with him entred not only the act, but the first power of murther; for before that time neither could the Serpent nor *Adam* destroy *Eve*, nor *Adam* and *Eve* each other; for that had overthrown the intention of the World, and put its Creator to act the sixth day over again.

Moreover, Whereas in regard of speech, and vocal conference with *Eve*, it may be thought he would rather assume an humane shape and organs, than the improper form of a Serpent; it implies no material impediment. Nor need we to wonder how he contrived a voice out of the mouth of a Serpent, who hath done the like out of the belly of a *Pythonissa*, and the trunk of an Oak; as he did for many years at *Dodona*.

Why *Eve* wondered not at the Serpents speaking.

Lastly, Whereas it might be conceived that an humane shape was fitter for this enterprise; it being more than probable she would be amazed to hear a Serpent speak; some conceive she might not yet be certain that only man was priviledged with speech; and being in the novity of the Creation, and inexperience of all things, might not be affrighted to hear a Serpent speak. Beside she might be ignorant of their natures, who was not versed in their names, as being not present at the general survey of Animals, when *Adam* assigned unto every one a name concordant unto its nature. Nor is this only my opinion, but the determination of *Lombard* and *Tostatus*; and also the reply of *Cyril* unto the objection of *Julian*, who compared this story unto the fables of the *Greeks*.

CHAP. V.

Of the Picture of Adam *and* Eve *with Navels.*

ANother mistake there may be in the Picture of our first Parents, who after the manner of their Posterity are both delineated with a Navel. And this is observable not only in ordinary and stained pieces, but in the Authentick draughts of *Urbin Angelo* and others. Which notwithstanding cannot be allowed, except we impute that unto the first cause, which we impose not on the second; or what we deny unto Nature, we impute unto Naturity it self; that

that is, that in the first and most accomplished piece, the Creator affected superfluities, or ordained parts without use or office.

What the Navel is, and for what use.

For the use of the Navel is to continue the Infant unto the Mother, and by the vessels thereof to convey its aliment and sustentation. The vessels whereof it consisteth, are the umbilical vein, which is a branch of the *Porta*, and implanted in the Liver of the Infant; two Arteries likewise arising from the Iliacal branches, by which the Infant receiveth the purer portion of blood and spirits from the mother; and lastly, the *Urachos* or ligamental passage derived from the bottom of the bladder, whereby it dischargeth the waterish and urinary part of its aliment. Now upon the birth, when the Infant forsaketh the womb, although it dilacerate, and break the involving membranes, yet do these vessels hold, and by the mediation thereof the Infant is connected unto the womb, not only before, but a while also after the birth. These therefore the midwife cutteth off, contriving them into a knot close unto the body of the Infant; from whence ensueth that tortuosity or complicated nodosity we usually call the Navel; occasioned by the colligation of vessels before mentioned.

That *Adam* and *Eve* had not Navels.

Now the Navel being a part, not precedent, but subsequent unto generation, nativity or parturition, it cannot be well imagined at the creation or extraordinary formation of *Adam*, who immediately issued from the Artifice of God; nor also that of *Eve*, who was not solemnly begotten, but suddenly framed, and anomalously proceeded from *Adam*.

And if we be led into conclusions that *Adam* had also this part, because we behold the same in our selves, the inference is not reasonable; for if we conceive, the way of his formation, or of the first animals, did carry in all points a strict conformity unto succeeding productions, we might fall into imaginations that *Adam* was made without Teeth; or that he ran through those notable alterations in the vessels of the heart, which the Infant suffereth after birth: we need not dispute whether the egg or bird were first; and might conceive that Dogs were created blind, because we observe they are littered so with us. Which to affirm, is to confound, at least to regulate creation unto generation, the first Acts of God, unto the second of Nature; which were determined in that general indulgence, *Encrease and Multiply*, produce or propagate each other; that is, not answerably in all points, but in a prolonged method according to seminal progression. For the formation of things at first was different from their generation after; and although it had nothing to precede it, was aptly contrived for that which should succeed it. And therefore though *Adam* were framed without this part, as having no other womb than that of his proper principles, yet was not his posterity without the same: for the seminality of his fabrick contained the power thereof; and was endued with the science of those parts whose predestinations upon succession it did accomplish.

All the Navel therefore and conjunctive part we can suppose in *Adam*, was his dependency on his Maker, and the connexion he must needs have unto heaven, who was the Son of God. For holding no dependence on any preceding Efficient but God; in the act of his production there may be conceived some connexion, and *Adam* to have been in a momental Navel with his Maker. And although from his carnality and corporal existence, the conjunction seemeth no nearer than of causality and effect; yet in his immortal and diviner part he seemed to hold a nearer coherence, and an umbilicality even with God himself. And so indeed although the propriety of this part be found but in some animals, and many species there are which have no Navel at all; yet is there one link and common connexion, one general ligament, and necessary obligation of all what ever unto God. Whereby although they act themselves at distance, and seem to be at loose; yet do they hold a continuity with their Maker. Which catenation or conserving union when ever his pleasure shall divide, let go, or separate; they shall fall from their existence, essence, and operations: in brief, they must retire unto their primitive nothing, and shrink into their Chaos again.

They who hold the egg was before the Bird, prevent this doubt in many other animals, which also extendeth unto them: For birds are nourished by umbilical

bilical veſſels, and the Navil is manifeſt ſometimes a day or two after excluſion. The ſame is probable in all oviparous excluſions, if the leſſer part of eggs muſt ſerve for the formation, the greater part for nutriment. The ſame is made out in the eggs of Snakes; and is not improbable in the generation of Porwiggles or Tadpoles, and may be alſo true in ſome vermiparous excluſions: although (as we have obſerved in the daily progreſs in ſome) the whole Maggot is little enough to make a Fly, without any part remaining.

CHAP. VI.

Of the Pictures of Eaſtern Nations, and the Jews *at their Feaſts, eſpecially our* Saviour *at the Paſſover.*

CONcerning the Pictures of the *Jews*, and Eaſtern Nations at their Feaſts, concerning the geſture of our Saviour at the Paſſover, who is uſually deſcribed ſitting upon a ſtool or bench at a ſquare Table, in the middeſt of the Twelve, many make great doubt; and (though they concede a Table-geſture) will hardly allow this uſual way of Seſſion.

Wherein reſtraining no mans enquiry, it will appear that accubation, or lying down at meals was a geſture uſed by very many Nations. That the *Perſians* uſed it, beſide the teſtimony of humane Writers, is deducible from that paſſage in *Eſther*. *That when the King returned into the place of the banquet of wine, Haman was fallen upon the bed whereon Eſther was.* That the *Parthians* uſed it, is evident from *Athenæus*, who delivereth out of *Poſſidonius*, that their King lay down at meals, on an higher bed than others. That *Cleopatra* thus entertained *Anthony*, the ſame Author manifeſteth when he ſaith, ſhe prepared twelve Tricliniums. That it was in uſe among the *Greeks*, the word *Triclinium* implieth, and the ſame is alſo declarable from many places in the Sympoſiacks of *Plutarch*. That it was not out of faſhion in the days of *Ariſtotle*, he declareth in his politicks; when among the Inſtitutionary rules of youth, he adviſeth they might not be permitted to hear Iambicks and Tragedies before they were admitted unto diſcumbency or lying along with others at their meals. That the *Romans* uſed this geſture at repaſt, beſide many more, is evident from *Lipſius*, *Mercurialis*, *Salmaſius* and *Cuconius*, who have expreſly and diſtinctly treated hereof.

Eſther 7.

Now of their accumbing places, the one was called *Stibadion* and *Sigma*, carrying the figure of an half Moon, and of an uncertain capacity, whereupon it received the name of *Hexaclinon*, *Octoclinon*, according unto that of *Martial*,

Accipe Lunatâ ſcriptum teſtudine Sigma:
Octo capit, veniat quiſquis amicus erit.

Hereat in ſeveral ages the left and right horn were the principal places, and the moſt honourable perſon, if he were not maſter of the feaſt, poſſeſſed one of thoſe rooms. The other was termed *Triclinium*, that is, Three beds about a Table, as may be ſeen in the figures thereof, and particularly in the *Rhamnuſian Triclinium*, ſet down by *Mercurialis*. The cuſtomary uſe hereof was probably deduced from the frequent uſe of bathing, after which they commonly retired to bed, and refected themſelves with repaſt; and ſo that cuſtom by degrees changed their cubiculary beds into diſcubitory, and introduced a faſhion to go from the baths unto theſe.

Merc. De Arte Gymnaſtica.

The ancient geſture or poſition of the body at feaſts.

As for their geſture or poſition, the men lay down leaning on their left elbow, their back being advanced by ſome pillow or ſoft ſubſtance: the ſecond lay ſo with his back towards the firſt, that his head attained about his boſome; and the reſt in the ſame order. For women, they ſat ſometimes diſtinctly with their ſex, ſometime promiſcuouſly with men, according to affection or favour, as is delivered by *Juvenal*,

Gremio

Gremio jacuit nova nupta mariti.

And by *Suetonius* of *Caligula*, that at his Feasts he placed his Sisters, with whom he had been incontinent, successively in order below him.

Again, As their Beds were three, so the Guests did not usually exceed that number in every one; according to the ancient Laws, and Proverbial Observations to begin with the Graces, and make up their Feasts with the Muses. And therefore it was remarkable in the Emperor *Lucius Verus*, that he lay down with twelve: which was, saith *Julius Capitolinus*, *præter exempla majorum*, not according to the custom of his Predecessors, except it were at publick and nuptial Suppers. The regular number was also exceeded in the last supper, whereat there were no less than thirteen, and in no place fewer than ten; for, as *Josephus* delivereth, it was not lawful to celebrate the Passover with fewer than that number.

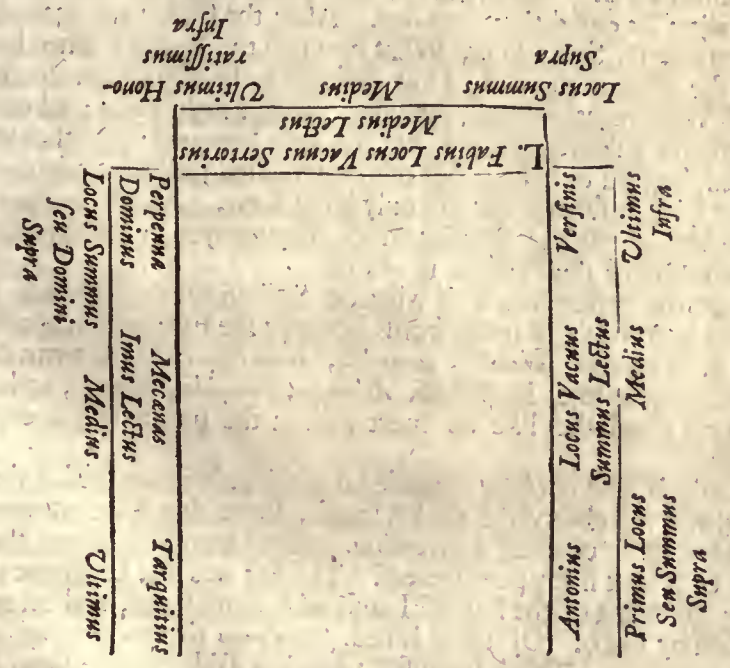
Lastly, For the disposing and ordering of the persons: The first and middle beds were for the guests, the third and lowest for the Master of the house and his family; he always lying in the first place of the last Bed, that is, next the middle Bed; but if the Wife or Children were absent, their rooms were supplied by the * *Umbræ*, or hangers on, according to that of *Juvenal*

——*Locus est & pluribus Umbris.*

* Who the *umbræ* were at banquets.

For the Guests, the honourablest place in every Bed was the first, excepting the middle or second Bed; wherein the most honourable Guest of the Feast was placed in the last place, because by that position he might be next the Master of the Feast. For the Master lying in the first of the last Bed, and the principal Guest in the last place of the second, they must needs be next each other; as this figure doth plainly declare, and whereby we may apprehend the Feast of *Perpenna* made unto *Sertorius*, described by *Salustius*, whose words we shall thus read with *Salmasius*: *Igitur discubuere, Sertorius inferior in medio lecto, suprà Fabius; Antonius in summo; Infrà Scriba Sertorii Versius; alter scriba Mecænas in Imo, medius inter Tarquitium & Dominum Perpennam.*

Jul. Scalig. familiarum exercitationum Problema 1.



At this Feast there were but seven; the middle places of the highest and middle Bed being vacant; and hereat was *Sertorius* the General, and principal guest slain. And so may we make out what is delivered by *Plutarch* in his life, that lying on his back, and raising himself up, *Perpenna* cast himself upon

upon his ſtomach; which he might very well do, being Maſter of the Feaſt, and lying next unto him. And thus alſo from this Tricliniary diſpoſure, we may illuſtrate that obſcure expreſſion of *Seneca*; That the Northwind was in the middle, the North-Eaſt on the higher ſide, and the North-Weſt on the lower. For as appeareth in the circle of the winds, the North-Eaſt will anſwer the Bed of *Antonius*, and the North-Weſt that of *Perpenna*.

That the cuſtom of feaſting upon Beds was in uſe among the *Hebrews*, many deduce from *Ezekiel*, *Thou ſatteſt upon a ſtately bed, and a table prepared before it.* The cuſtom of Diſcalceation or putting off their ſhoes at meals, is conceived to confirm the ſame; as by that means keeping their Beds clean: and therefore they had a peculiar charge to eat the Paſſover with their ſhoes on; which Injunction were needleſs, if they uſed not to put them off. However it were in times of high antiquity, probable it is that in after Ages they conformed unto the faſhions of the *Aſſyrians* and Eaſtern Nations, and laſtly of the *Romans*, being reduced by *Pompey* unto a Provincial ſubjection.

Ezek. 23.

That this diſcumbency at meals was in uſe in the days of our Saviour, is conceived probable from ſeveral ſpeeches of his expreſſed in that phraſe, even unto common Auditors, as *Luke* 14. *Cum invitatus fueris ad nuptias, non diſcumbas in primo loco*, and beſides many more, *Matthew* 23. When reprehending the *Scribes* and *Phariſees*, he ſaith, *Amant protocliſias, id eſt, primos recubitus in cœnis, & protocathedrias, ſive, primas cathedras, in Synagogis:* wherein the terms are very diſtinct, and by an Antitheſis do plainly diſtinguiſh the poſture of ſitting, from this of lying on Beds. The conſent of the *Jews* with the *Romans* in other ceremonies and rites of feaſting, makes probable their conformity in this. The *Romans* waſhed, were anointed, and wore a cenatory garment: and that the ſame was practiſed by the *Jews*, is deduceable from that expoſtulation of our Saviour with *Simon*, That he *waſhed not his feet, nor anointed his head with oyl*; the common civilities at feſtival entertainments: and that expreſſion of his concerning the cenatory or *wedding garment*; and as ſome conceive of the linnen garment of the young man, or St. *John*; which might be the ſame he wore the night before at the laſt Supper.

Luke 7.

Matth. 22.

That they uſed this geſture at the Paſſover, is more than probable from the teſtimony of *Jewiſh* Writers, and particularly of *Ben-maimon* recorded by *Scaliger De emendatione temporum*. After the ſecond cup according to the Inſtitution, the Son asketh, What meaneth this ſervice? Then he that maketh the declaration, ſaith, How different is this night from all other nights? for all other nights we waſh but once, but this night twice; all other we eat leavened or unleavened bread, but this only leavened; all other we eat fleſh roaſted, boyled or baked, but this only roaſted; all other nights we eat together lying or ſitting, but this only lying along. And this poſture they uſed as a token of reſt and ſecurity which they enjoyed, far different from that at the eating of the Paſſover in *Ægypt*.

Exod. 12.

That this geſture was uſed when our Saviour eat the Paſsover, is not conceived improbable from the words whereby the Evangeliſts expreſs the ſame, that is, ἀναπίπτειν, ἀνακεῖσθαι, κατακεῖσθαι, ἀνακλιθῆναι, which terms do properly ſignifie this Geſture, in *Ariſtotle*, *Athenæus*, *Euripides*, *Sophocles*, and all humane Authors; and the like we meet with in the paraphraſtical expreſſion of *Nonnus*.

Laſtly, If it be not fully conceded, that this geſture was uſed at the Paſsover, yet that it was obſerved at the laſt ſupper, ſeems almoſt incontrovertible: for at this feaſt or cenatory convention, learned men make more than one ſupper, or at leaſt many parts thereof. The firſt was that Legal one of the Paſsover, or eating of the Paſchal Lamb with bitter herbs, and ceremonies deſcribed by *Moſes*. Of this it is ſaid, *Then when the even was come, he ſat down with the twelve*. This is ſuppoſed when it is ſaid, that the *Supper being ended, our Saviour aroſe, took a towel and waſhed the diſciples feet.* The ſecond was common and Domeſtical, conſiſting of ordinary and undefined Proviſions; of this it may be ſaid, that our Saviour took his garment, and ſat down again, after he had waſhed the Diſciples feet, and performed the preparative civilities of Suppers; at this 'tis conceived the Sop was given unto *Judas*, the

Matth. 26. John 13.

the Original word implying ſome broth or decoction, not uſed at the Paſsover. The third or latter part was Euchariſtical, which began at the breaking and bleſſing of the bread, according to that of *Matthew*, *And as they were eating, Jeſus took bread and bleſſed it.*

Now although at the Paſsover or firſt Supper, many have doubted this Reclining poſture, and ſome have affirmed that our Saviour ſtood; yet that he lay down at the other, the ſame men have acknowledged, as *Chryſoſtom*, *Theophylact*, *Auſtin*, and many more. And if the tradition will hold, the poſition is unqueſtionable; for the very *Triclinium* is to be ſeen at *Rome*, brought thither by *Veſpaſian*, and graphically ſet forth by *Caſalius*. *De veterum ritibus.*

Thus may it properly be made out, what is delivered *John* 13. *Erat recumbens unus ex Diſcipulis ejus in ſinu Jeſu quem diligebat*; *Now there was leaning on Jeſus's boſom one of his Diſciples whom Jeſus loved*; which geſture will not ſo well agree unto the poſition of ſitting, but is natural, and cannot be avoided in the Laws of accubation. And the very ſame expreſſion is to be found in *Pliny*, concerning the Emperor *Nerva* and *Veiento* whom he favoured; *Cœnabat Nerva cum paucis, Veiento recumbebat propius atque etiam in ſinu*; and from this cuſtom aroſe the word ἐνσύσσιος, that is, a near and boſom friend. And therefore *Caſaubon* juſtly rejecteth *Theophylact*; who not conſidering the ancient manner of decumbency, imputed this geſture of the beloved Diſciple unto Ruſticity, or an act of incivility. And thus alſo have ſome conceived, it may be more plainly made out what is delivered of *Mary Magdalen*, That ſhe *ſtood at Chriſts feet behind him weeping, and began to waſh his feet with tears, and did wipe them with the hairs of her head.* Which actions, if our Saviour ſat, ſhe could not perform ſtanding, and had rather ſtood behind his back, than at his feet. And therefore it is not allowable, what is obſervable in many pieces, and even of *Raphael Urbin*; wherein *Mary Magdalen* is pictured before our Saviour, waſhing his feet on her knees; which will not conſiſt with the ſtrict deſcription and letter of the Text. Not. in *Evans* *Luke* 7.

Now whereas this poſition may ſeem to be diſcountenanced by our Tranſlation, which uſually renders it *ſitting*, it cannot have that illation; for the *French* and *Italian* Tranſlations expreſſing neither poſition of ſeſſion or recubation, do only ſay that he *placed* himſelf at the Table; and when ours expreſſeth the ſame by *ſitting*, it is in relation unto our cuſtom, time, and apprehenſion. The like upon occaſion is not unuſual: ſo when it is ſaid *Luke* 4. πτύξας τὸ βιβλίον, and the Vulgar renders it, *Cum plicâſſet librum*, ours tranſlateth it, he ſhut or cloſed the Book; which is an expreſſion proper unto the paginal books of our times, but not ſo agreeable unto Volumes or rolling books in uſe among the *Jews*, not only in elder times, but even unto this day. So when it is ſaid, the *Samaritan* delivered unto the Hoſt two pence for the proviſion of the *Levite*; and when our Saviour agreed with the Labourers for a penny a day; in ſtrict tranſlation it ſhould be ſeven pence half penny; and is not to be conceived our common penny, the ſixtieth part of an ounce. For the word in the Original is δηνάριον, in Latine, *Denarius*, and with the *Romans* did value the eighth part of an ounce, which after five ſhillings the ounce amounteth unto ſeven pence half penny of our money. What *Denarius*, or the penny in the Goſpel is.

Laſtly, Whereas it might be conceived that they eat the Paſsover ſtanding rather than ſitting, or lying down, according to the Inſtitution, *Exod.* 12. *Thus ſhall you eat, with your loins girded, your ſhoes on your feet, and your ſtaff in your hand*; the *Jews* themſelves reply, this was not required of ſucceeding generations, and was not obſerved but in the Paſſover of *Egypt*. And ſo alſo many other injunctions were afterward omitted, as the taking up of the Paſchal Lamb, from the tenth day, the eating of it in their Houſes diſperſed; the ſtriking of the blood on the door-poſts, and the eating thereof in haſt. Solemnities and Ceremonies primitively enjoyned, afterward omitted; as was alſo this of ſtation: for the occaſion ceaſing, and being in ſecurity, they applied themſelves unto geſtures in uſe among them. Ceremonies of the Paſſover omitted.

Now in what order of recumbency Chriſt and the Diſciples were diſpoſed, is not ſo eaſily determined. *Caſalius* from the Lateran *Triclinium* will tell us, that there being thirteen, five lay down in the firſt Bed, five in the laſt,

and

and three in the middle Bed; and that our Saviour poſſeſſed the upper place thereof. That *John* lay in the ſame Bed ſeems plain, becauſe he leaned on our Saviours Boſom. That *Peter* made the third in that Bed, conjecture is made, becauſe he beckoned unto *John*, as being next him, to ask of Chriſt, *who it was that ſhould betray him.* That *Judas* was not far off ſeems probable, not only becauſe he dipped in the ſame diſh, but becauſe he was ſo near, that our Saviour could hand the Sop unto him.

CHAP. VII.

Of the Picture of our Saviour with long hair.

ANother Picture there is of our Saviour deſcribed with long hair, according to the cuſtom of the *Jews*, and his deſcription ſent by *Lentulus* unto the Senate. Wherein indeed the hand of the Painter is not accuſable, but the judgment of the common Spectator; conceiving he obſerved this faſhion of his hair, becauſe he was a *Nazarite*; and confounding a *Nazarite* by vow, with thoſe by birth or education.

The *Nazarite* by vow is declared, *Numb.* 6. And was to refrain three things, drinking of Wine, cutting the hair, and approaching unto the dead; and ſuch a one was *Sampſon.* Now that our Saviour was a *Nazarite* after this kind, we have no reaſon to determine; for he drank Wine, and was therefore called by the *Phariſees*, a Wine-bibber; he approached alſo the dead, as when he raiſed from death *Lazarus*, and the daughter of *Jairus.*

The other *Nazarite* was a Topical appellation, and appliable unto ſuch as were born in *Nazareth*, a City of *Galilee*, and in the Tribe of *Naphthali.* Neither if ſtrictly taken was our Saviour in this ſenſe a *Nazarite*; for he was born in *Bethlehem* in the Tribe of *Judah*; but might receive that name, becauſe he abode in that City; and was not only conceived therein, but there alſo paſſed the ſilent part of his life, after his return from *Egypt*; as is delivered by *Matthew*, *And he came and dwelt in a City called Nazareth, that it might be fulfilled which was ſpoken by the Prophet; He ſhall be called a Nazarene.* Both which kinds of *Nazarites*, as they are diſtinguiſhable by *Zain*, and *Tſade* in the Hebrew, ſo in the Greek, by *Alpha* and *Omega*; for as *Janſenius* obſerveth, where the votary *Nazarite* is mentioned, it is written, Ναζιραῖος, as *Levit.* 6. and *Lament.* 4. Where it is ſpoken of our Saviour, we read it, Ναζωραῖος, as in *Matthew*, *Luke* and *John*; only *Mark* who writ his Goſpel at *Rome*, did Latinize, and wrote it Ναζαρηνός.

Janſ. Concordia Evangelica.

CHAP.

CHAP. VIII.

Of the Picture of Abraham *ſacrificing* Iſaac.

IN the Picture of the Immolation of *Iſaac*, or *Abraham* ſacrificing his Son; *Iſaac* is deſcribed as a little Boy; which notwithſtanding is not conſentaneous unto the authority of Expoſitors, or the circumſtance of the Text. For therein it is delivered that *Iſaac* carried on his back the wood for the ſacrifice; which being an holocauſt or burnt-offering to be conſumed unto aſhes, we cannot well conceive a burthen for a boy; but ſuch a one unto *Iſaac*, as that which it typified was unto Chriſt, that is, the wood or croſs whereon he ſuffered; which was too heavy a load for his ſhoulders, and was fain to be relieved therein by *Simon* of *Cyrene*.

Again, He was ſo far from a Boy, that he was a Man grown, and at his full ſtature, if we believe *Joſephus*, who placeth him in the laſt of *Adoleſcency*, and makes him Twenty five years old. And whereas in the Vulgar Tranſlation he is termed *puer*, it muſt not be ſtrictly apprehended (for that age properly endeth in puberty, and extendeth but unto fourteen) but reſpectively unto *Abraham*, who was at that time above Sixſcore. And therefore alſo herein he was not unlike unto him, who was after led dumb unto the ſlaughter, and commanded by others, who had legions at command; that is, in meekneſs and humble ſubmiſſion. For had he reſiſted, it had not been in the power of his aged parent to have enforced; and many at his years have performed ſuch acts, as few beſides at any. *David* was too ſtrong for a Lion and a Bear; *Pompey* had deſerved the name of Great; *Alexander* of the ſame cognomination was *Generaliſſimo* of *Greece*; and *Annibal* but one year after, ſucceeded *Aſdrubal* in that memorable War againſt the *Romans*.

Men of eminent fame and proweſs at 25.

CHAP. IX.

Of the Picture of Moſes *with Horns.*

IN many pieces, and ſome of ancient Bibles, *Moſes* is deſcribed with Horns. The ſame deſcription we find in a Silver Medal; that is, upon one ſide *Moſes* horned, and on the reverſe the commandment againſt ſculptile Images. Which is conceived to be a coynage of ſome *Jews*, in deriſion of Chriſtians, who firſt began that Pourtraict.

The ground of this abſurdity was ſurely a miſtake of the *Hebrew* Text, in the Hiſtory of *Moſes* when he deſcended from the Mount; upon the affinity of *Karen* and *Karan*, that is, *an horn*, and *to ſhine*, which is one quality of Horn: The Vulgar Tranſlation conforming unto the former. *Ignorabat quòd cornuta eſſet facies ejus. Qui videbant faciem Moſis eſſe cornutam.* But the *Chaldee* paraphraſe, tranſlated by *Paulus Fagius*, hath otherwiſe expreſſed it. *Moſes neſciebat quòd multus eſſet ſplendor gloriæ vultus ejus. Et viderunt filii Iſrael quòd multa eſſet claritas gloriæ faciei Moſis.* The expreſſion of the Septuagint is as large, δεδόξασται ἡ ὄψις τὸ χρῶμα & τὸ προσώπου, *Glorificatus eſt aſpectus cutis, ſeu coloris faciei.*

Exod. 34. 29, 35.

And this paſſage of the Old Teſtament is well explained by another of the New; wherein it is delivered, that *they could not ſtedfaſtly behold the face of Moſes*, διὰ τὴν δόξαν τοῦ προσώπου, that is, *for the glory of his* 2 *Cor.* 3.

Countenance. And surely the exposition of one Text is best performed by another; men vainly interposing their constructions, where the Scripture decideth the controversie. And therefore some have seemed too active in their expositions, who in the story of *Rahab* the Harlot, have given notice that the word also signifieth an Hostess; for in the Epistle to the *Hebrews*, she is plainly termed πόρνη, which signifies not an Hostess, but a pecuniary and prostituting Harlot; a term applied unto *Lais* by the *Greeks*, and distinguished from ἑταίρας, or *amica*, as may appear in the thirteenth of *Athenæus*.

What kind of Harlot she was, read *Camar. De vita Eliæ.*

And therefore more allowable is the Translation of *Tremellius*; *Quod splendida facta esset cutis faciei ejus*; or as *Estius* hath interpreted it, *facies ejus erat radiosa*, his face was radiant, and dispersing beams like many horns and cones about his head; which is also consonant unto the original signification, and yet observed in the pieces of our Saviour, and the Virgin *Mary*, who are commonly drawn with scintillations, or radiant Halo's about their head; which after the *French* expression, are usually termed, *the Glory*.

Now if besides this occasional mistake, any man shall contend a propriety in this picture, and that no injury is done unto Truth by this description, because an horn is the Hieroglyphick of authority, power and dignity, and in this Metaphor is often used in Scripture; the piece I confess in this acception is harmless and agreeable unto *Moses*: and under such emblematical constructions, we find that *Alexander* the Great, and *Attila* King of *Hunnes*, in ancient Medals are described with horns. But if from the common mistake, or any solary consideration we persist in this description; we vilify the mystery of the irradiation, and authorize a dangerous piece conformable unto that of *Jupiter Hammon*; which was the Sun, and therefore described with horns; as is delivered by *Macrobius*; *Hammonem quem Deum solem occidentem Libyes existimant, arietinis cornibus fingunt, quibus id animal valet, sicut radiis sol.* We herein also imitate the Picture of *Pan*, and *Pagan* emblem of Nature. And if (as *Macrobius* and very good Authors concede) *Bacchus*, (who is also described with horns) be the same Deity with the Sun; and if (as *Vossius* well contendeth) *Moses* and *Bacchus* were the same person; their descriptions must be relative, or the Tauricornous picture of the one, perhaps the same with the other.

Moses and *Bacchus* supposed to be the same person. *De origine Idololatriæ.*

CHAP. X.

Of the Scutcheons of the Tribes of Israel.

WE will not pass over the Scutcheons of the Tribes of *Israel*, as they are usually described in the Maps of *Canaan* and several other pieces; generally conceived to be the proper coats, and distinctive badges of their several Tribes. So *Reuben* is conceived to bear three Bars wave, *Judah* a Lyon Rampant, *Dan* a Serpent nowed, *Simeon* a sword inpale the point erected, *&c.* The ground whereof is the last Benediction of *Jacob*, wherein he respectively draweth comparisons from things here represented.

Gen. 49.

Now herein although we allow a considerable measure of truth, yet whether, as they are usually described, these were the proper cognizances, and coat-arms of the Tribes; whether in this manner applyed, and upon the grounds presumed, material doubts remain.

For first, They are not strictly made out from the Prophetical blessing of *Jacob*; for *Simeon* and *Levi* have distinct coats, that is, a Sword, and the two Tables, yet are they by *Jacob* included in one Prophecy, *Simeon and Levi are brethren, Instruments of cruelties are in their habitations.* So *Joseph* beareth an Ox, whereof notwithstanding there is no mention in this Prophecy; for

for therein it is said, *Joseph is a fruitful bough, even a fruitful bough by a well*; by which repetition are intimated the two Tribes descending from him, *Ephraim* and *Manasses*; whereof notwithstanding *Ephraim* only beareth an Ox: True it is, that many years after in the benediction of *Moses*, it is said of *Joseph*; *His glory is like the firstlings of his Bullock*: and so we may concede, what *Vossius* learnedly declareth, that the *Ægyptians* represented *Joseph* in the Symbol of an Ox; for thereby was best implied the dream of *Pharaoh*, which he interpreted, the benefit by Agriculture, and provident provision of corn which he performed; and therefore did *Serapis* bear a bushel upon his head. Deut. 33.

Again, If we take these two benedictions together, the resemblances are not appropriate, and *Moses* therein conforms not unto *Jacob*; for that which in the Prophecie of *Jacob* is appropriated unto one; is in the blessing of *Moses* made common unto others. So whereas *Judah* is compared unto a Lion by *Jacob*, *Judah is a Lions whelp*, the same is applied unto *Dan* by *Moses*, *Dan is a Lions whelp, he shall leap from Bashan, and also unto Gad; he dwelleth as a Lion.*

Thirdly, If a Lion were the proper coat of *Judah*, yet were it not probably a Lion Rampant, as it is commonly described, but rather couchant or dormant, as some *Heralds* and *Rabbins* do determine; according to the letter of the Text, *Recumbens dormisti ut Leo, He couched as a Lion, and as a young Lion, who shall rouse him?*

Lastly, when it is said, *Every man of the Children of Israel shall pitch by his own standard with the Ensign of their fathers house*; upon enquiry what these Standards and Ensigns were, there is no small incertainty; and men conform not unto the Prophecie of *Jacob*. Christian Expositors are fain herein to rely upon the *Rabbins*, who notwithstanding are various in their traditions, and confirm not these common descriptions. For as for inferiour Ensigns, either of particular bands or houses, they determine nothing at all; and of the four principal or Legionary standards, that is, of *Judah*, *Reuben*, *Ephraim*, and *Dan* (under every one whereof marched three Tribes) they explain them very variously. *Jonathan* who compiled the *Thargum* conceives the colours of these banners to answer the precious stones in the breast-plate, and upon which the names of the Tribes were engraven. So the standard for the Camp of *Judah*, was of three colours, according unto the stones, Chalcedony, Saphir and Sardonyx; and therein were expressed the names of the three Tribes, *Judah*, *Issachar*, and *Zabulon*, and in the midst thereof was written, *Rise up Lord, and let thy enemies be scattered; and let them that hate thee, flee before thee:* in it was also the pourtraict of a Lion. The standard of *Reuben* was also of three colours, Sardine, Topaz, and Amethyst; therein were expressed the names of *Reuben*, *Simeon*, and *Gad*, in the midst was written, *Hear, O Israel, The Lord our God, the Lord is one:* Therein was also the pourtraicture of a Hart. But *Abenezra* and others, beside the colours of the field, do set down other charges, in *Reuben*'s the form of a Man or Mandrake, in that of *Judah* a Lion, in *Ephraim*'s an Ox, in *Dan*'s the figure of an Eagle. Num. 2. The like also P. *Fagius* upon the Thargum or *Chaldee* Paraphrase of *Onkelos*. Num. 1. Num. 10. Deut. 6.

And thus indeed the four figures in the banners of the principal squadrons of *Israel*, are answerable unto the Cherubins in the vision of *Ezekiel*; every one carrying the form of all these. As for the likeness of their faces, they four had the likeness of the face of a Man, and the face of a Lion on the right side, and they four had the face of an Ox on the left side, they four had also the face of an Eagle. And conformable hereunto the pictures of the Evangelists (whose Gospels are the Christian banners) are set forth with the addition of a Man or Angel, an Ox, a Lion, and an Eagle. And these symbolically represent the office of Angels, and Ministers of Gods Will; in whom is required understanding as in a man, courage and vivacity as in the Lion, service and ministerial officiousness, as in the Ox, expedition, or celerity of execution, as in the Eagle. Ezek. 1. The common Pictures of the 4 Evangelists explicated.

From hence therefore we may observe that these descriptions, the most authentick of any, are neither agreeable unto one another, nor unto the Scutcheons in question. For though they agree in *Ephraim* and *Judah*, that is, the Ox and the Lion, yet do they differ in those of *Dan* and *Reuben*, as far

as an Eagle is different from a Serpent, and the figure of a Man, Hart, or Mandrake, from three Bars wave. Wherein notwithstanding we rather declare the incertainty of Arms in this particular, than any way question their antiquity; for hereof more ancient examples there are, than the Scutcheons of the Tribes, if *Osyris*, *Mizraim* or *Jupiter* the Just, were the Son of *Cham*; for of his two Sons, as *Diodorus* delivereth, the one for his Device gave a Dog, the other a Wolf. And, beside the shield of *Achilles*, and many ancient *Greeks*: if we receive the conjecture of *Vossius*, that the Crow upon *Corvinus* his head, was but the figure of that Animal upon his helmet, it is an example of Antiquity among the *Romans*.

The Antiquity of bearing Scutcheons.

But more widely must we walk, if we follow the doctrine of the *Cabalists*, who in each of the four banners inscribe a letter of the Tetragrammaton, or quadriliteral name of God: and mysterizing their ensigns, do make the particular ones of the twelve Tribes, accommodable unto the twelve signs in the Zodiack, and twelve months in the Year: but the Tetrarchical or general banners, of *Judah*, *Reuben*, *Ephraim*, and *Dan*, unto the signs of *Aries*, *Cancer*, *Libra* and *Capricornus*; that is, the four cardinal parts of the Zodiack, and seasons of the year.

Recius *de cœlesti Agricultura*, *lib.* 4.

CHAP. XI.

Of the Pictures of the Sibyls.

THE Pictures of the *Sibyls* are very common, and for their Prophecies of Christ in high esteem with Christians; described commonly with youthful faces, and in a defined number. Common pieces making twelve, and many precisely ten; observing therein the account of *Varro*, that is, *Sibylla Delphica*, *Erythræa*, *Samia*, *Cumana*, *Cumæa*, or *Cimmeria*, *Hellespontiaca*, *Libyca*, *Phrygia*, *Tiburtina*, *Persica*. In which enumeration I perceive learned men are not satisfied, and many conclude an irreconcileable incertainty; some making more, others fewer, and not this certain number. For *Suidas*, though he affirm that in divers ages there were ten, yet the same denomination he affordeth unto more; *Boyssardus* in his Tract of Divination hath set forth the Icons of these Ten, yet addeth two others, *Epirotica*, and *Ægyptia*; and some affirm that Propheſying women were generally named *Sibyls*.

Others make them fewer: *Martianus Capella* two; *Pliny* and *Solinus* three; *Ælian* four; and *Salmasius* in effect but seven. For discoursing hereof in his *Plinian* Exercitations, he thus determineth; *Ridere licet hodiernos Pictores, qui tabulas proponunt Cumanæ, Cumææ, & Erythrææ, quasi trium diversarum Sibyllarum; cùm una eademque fuerit Cumana, Cumæa, & Erythræa, ex plurium & doctissimorum Authorum sententia.* *Boyssardus* gives us leave to opinion there was no more than one; for so doth he conclude, *In tanta Scriptorum varietate liberum relinquimus Lectori credere, an una & eadem in diversis regionibus peregrinata, cognomen sortita sit ab iis locis ubi oracula reddidisse comperitur, an plures extiterint*: And therefore not discovering a resolution of their number from pens of the best Writers, we have no reason to determine the same from the hand and pencil of Painters.

As touching their age, that they are generally described as young women, History will not allow; for the *Sibyl* whereof *Virgil* speaketh, is termed by him *longæva sacerdos*, and *Servius* in his Comment amplifieth the same. The other that sold the books unto *Tarquin*, and whose History is plainer than any, by *Livie* and *Gellius* is termed *Anus*; that is, properly no woman of ordinary age, but full of years, and in the dayes of dotage, according to the * Etymology of *Festus*; and consonant unto the History, wherein it is said,

* *Anus*, *quasi* Ἀνῦς, *sine mente.*

ſaid, that *Tarquin* thought ſhe doated with old age. Which duly perpended, the *Licentia pictoria* is very large; with the ſame reaſon they may delineate old *Neſtor* like *Adonis*, *Hecuba* with *Helens* face, and Time with *Abſoloms* head. But this abſurdity that eminent Artiſt *Michael Angelo* hath avoided, in the Pictures of the *Cumean* and *Perſian* Sibyls, as they ſtand deſcribed from the printed ſculptures of *Adam Mantuanus*.

CHAP. XII.

Of the Picture deſcribing the death of Cleopatra.

THe Picture concerning the death of *Cleopatra* with two Aſps or venemous Serpents unto her arms, or breaſts, or both, requires conſideration: for therein (beſide that this variety is not excuſable) the thing it ſelf is queſtionable; nor is it indiſputably certain what manner of death ſhe died. *Plutarch* in the life of *Antony* plainly delivereth, that no man knew the manner of her death; for ſome affirmed ſhe periſhed by poiſon, which ſhe alwayes carried in a little hollow comb, and wore it in her hair. Beſide, there were never any Aſps diſcovered in the place of her death, although two of her Maids periſhed alſo with her; only it was ſaid, two ſmall and almoſt inſenſible pricks were found upon her arm; which was all the ground that *Cæſar* had to preſume the manner of her death. *Galen* who was contemporary unto *Plutarch*, delivereth two wayes of her death: that ſhe killed her ſelf by the bite of an Aſp, or bit an hole in her arm, and poured poiſon therein. *Strabo* that lived before them both, hath alſo two opinions; that ſhe died by the bite of an Aſp, or elſe a poiſonous ointment.

We might queſtion the length of the Aſps, which are ſometimes deſcribed exceeding ſhort; whereas the *Cherſea* or land-Aſp which moſt conceive ſhe uſed, is above four cubits long. Their number is not unqueſtionable; for whereas there are generally two deſcribed, *Auguſtus*, (as *Plutarch* relateth) did carry in his triumph the Image of *Cleopatra* but with one Aſp unto her arm. As for the two pricks, or little ſpots in her arm, they infer not their plurality: for like the Viper, the Aſp hath two teeth; whereby it left this impreſſion, or double puncture behind it.

And laſtly, We might queſtion the place; for ſome apply them unto her breaſt, which notwithſtanding will not conſiſt with the Hiſtory; and *Petrus Victorius* hath well obſerved the ſame. But herein the miſtake was eaſie; it being the cuſtom in capital malefactors to apply them unto the breaſt, as the Author *De Theriaca ad Piſonem*, an eye-witneſs hereof in *Alexandria*, where *Cleopatra* died, determineth: I beheld, ſaith he, in *Alexandria*, how ſuddenly theſe Serpents bereave a man of life; for when any one is condemned to this kind of death, if they intend to uſe him favourably, that is, to diſpatch him ſuddenly, they faſten an Aſp unto his breaſt; and bidding him walk about, he preſently periſheth thereby.

CHAP.

CHAP. XIII.

Of the Pictures of the Nine Worthies.

THE Pictures of the nine Worthies are not unqueſtionable, and to critical ſpectators may ſeem to contain ſundry improprieties. Some will enquire why *Alexander* the Great is deſcribed upon an Elephant: for we do not find he uſed that animal in his Armies, much leſs in his own perſon; but his Horſe is famous in Hiſtory, and its name alive to this day. Beſide, he fought but one remarkable battel, wherein there were any Elephants, and that was with *Porus* King of *India*; in which notwithſtanding, as *Curtius*, *Arrianus*, and *Plutarch* report, he was on Horſeback himſelf. And if becauſe he fought againſt Elephants, he is with propriety ſet upon their backs; with no leſs or greater reaſon is the ſame deſcription agreeable unto *Judas Maccabeus*, as may be obſerved from the hiſtory of the *Maccabees*; and alſo unto *Julius Cæſar*, whoſe triumph was honoured with captive Elephants, as may be obſerved in the order thereof ſet forth by *Jacobus Laurus*. And if alſo we ſhould admit this deſcription upon an Elephant, yet were not the manner thereof unqueſtionable, that is, in his ruling the beaſt alone; for beſide the Champion upon their back, there was alſo a guide or ruler, which ſat more forward to command or guide the beaſt. Thus did King *Porus* ride when he was overthrown by *Alexander*; and thus are alſo the towred Elephants deſcribed *Maccab.* 2. 6. Upon the beaſts there were ſtrong towers of wood, which covered every one of them, and were girt faſt unto them by devices: there were alſo upon every one of them thirty two ſtrong men, beſide the *Indian* that ruled them.

In ſplendore urbis Antiquæ.

Others will demand, not only why *Alexander* upon an Elephant, but *Hector* upon an Horſe: whereas his manner of fighting, or preſenting himſelf in battel, was in a Chariot, as did the other noble *Trojans*, who as *Pliny* affirmeth were the firſt inventers thereof. The ſame way of fight is teſtified by *Diodorus*, and thus delivered by Sir *Walter Raleigh*. Of the vulgar, little reckoning was made, for they fought all on foot, ſlightly armed, and commonly followed the ſucceſs of their Captains; who rode not upon Horſes, but in Chariots drawn by two or three Horſes. And this was alſo the ancient way of fight among the *Britains*, as is delivered by *Diodorus*, *Cæſar*, and *Tacitus*; and there want not ſome who have taken advantage hereof, and made it one argument of their original from *Troy*.

Laſtly, By any man verſed in Antiquity, the queſtion can hardly be avoided, why the Horſes of theſe Worthies, eſpecially of *Cæſar*, are deſcribed with the furniture of great ſaddles and ſtirrops; for ſaddles largely taken, though ſome defence there may be, yet that they had not the uſe of ſtirrops, ſeemeth of leſſer doubt; as *Pancirollus* hath obſerved, as *Polydore Virgil*, and *Petrus Victorius* have confirmed, expreſly diſcourſing hereon; as is obſervable from *Pliny*, and cannot eſcape our eyes in the ancient monuments, medals and Triumphant arches of the *Romans*. Nor is there any ancient claſſical word in Latin to expreſs them. For *Staphia*, *Stapes* or *Stapeda* is not to be found in Authors of this Antiquity. And divers words which may be urged of this ſignification, are either later, or ſignified not thus much in the time of *Cæſar*. And therefore as *Lipſius* obſerveth, leſt a thing of common uſe ſhould want a common word, *Franciſcus Philelphus* named them *Stapedas*, and *Bodinus Subiecus*, *Pedanos*. And whereas the name might promiſe ſome Antiquity, becauſe among the three ſmall bones in the Auditory Organ, by Phyſicians termed *Incus*, *Malleus* and *ſtapes*, one thereof from ſome reſemblance doth bear this name; theſe bones were not obſerved, much leſs named by *Hippocrates*, *Galen*, or any ancient Phyſician. But as *Laurentius* obſerveth, concerning the invention of the *ſtapes* or ſtirrop-bone,

De inventione rerum, variæ Lectiones.

The uſe of ſtirrops not ancient.

bone, there is some contention between *Columbus* and *Ingrassias*; the one of *Sicilia*, the other of *Cremona*, and both within the compass of this Century.

The same is also deducible from very approved Authors: *Polybius* speaking of the way which *Annibal* marched into *Italy*, useth the word βεβηματισται, that is, saith *Petrus Victorius*, it was stored with devices for men to get upon their horses, which ascents were termed *Bemata*, and in the life of *Caius Gracchus*, *Plutarch* expresseth as much. For endeavouring to ingratiate himself with the people, besides the placing of stones at every miles end; he made at nearer distances certain elevated places, and Scalary ascents, that by the help thereof they might with better ease ascend or mount their Horses. Now if we demand how Cavaliers then destitute of stirrops did usually mount their horses; as *Lipsius* informeth, the unable and softer sort of men had their ἀναβοχεῖς, or *Stratores*, which helped them up on horse-back, as in the practice of *Crassus* in *Plutarch*, and *Caracalla* in *Spartianus*, and the later example of *Valentinianus*, who because his horse rised before, that he could not be settled on his back, cut off the right hand of his *Strator*. But how the active and hardy persons mounted, *Vegetius* resolves us, that they used to vault or leap up, and therefore they had wooden horses in their houses and abroad, that thereby young men might enable themselves in this action: wherein by instruction and practice they grew so perfect, that they could vault up on the right or left, and that with their sword in hand, according to that of *Virgil*, *De re Militi.*

Poscit equos atque arma simul, saltúque superbus
Emicat. And again:
Infrænant alii currus, & corpora saltu
Injiciunt in equos.

So *Julius Pollux* adviseth to teach Horses to incline, dimit, and bow down their bodies, that their riders may with better ease ascend them. And thus may it more causally be made out, what *Hippocrates* affirmeth of the *Scythians*, that using continual riding, they were generally molested with the *Sciatica* or hip-gout. Or what *Suetonius* delivereth of *Germanicus*, that he had slender legs, but encreased them by riding after meals; that is, the humours descending upon their pendulosity, they having no support or suppedaneous stability.

Now if any shall say that these are petty errors and minor lapses, not considerably injurious unto truth, yet is it neither reasonable nor safe to contemn inferiour falsities; but rather as between falshood and truth there is no *medium*, so should they be maintained in their distances: nor the contagion of the one, approach the sincerity of the other.

CHAP. XIV.

Of the Picture of Jephtha *sacrificing his Daughter.*

THE hand of the Painter confidently setteth forth the Picture of *Jephtha* in the posture of *Abraham*, sacrificing his only daughter: Thus is it commonly received, and hath had the attest of many worthy Writers. Notwithstanding upon enquiry we find the matter doubtful, and many upon probable grounds to have been of another opinion: conceiving in this oblation not a natural but a civil kind of death, and a separation only unto the Lord. For that he pursued not his vow unto a literal oblation, there want not arguments both from the Text and Reason. That *Jephtha* did not kill his daughter, *Judg.* 11. 39.

For

For first, It is evident that she deplored her Virginity, and not her death; *Let me go up and down the mountains, and bewail my Virginity, I and my fellows.* Secondly, When it is said, that *Jephtha* did unto her *according unto his vow*, it is immediately subjoyned, *Et non cognovit virum*, and she knew no man; which as immediate in words, was probably most near in sense unto the Vow. Thirdly, it is said in the Text, that the daughters of *Israel* went yearly to talk with the Daughter of *Jephtha* four days in the year; which had she been sacrificed, they could not have done: For whereas the word is sometime translated *to lament*, yet doth it also signifie to talk or have conference with one, and by *Tremellius*, who was well able to judge of the Original, it is in this sense translated: *Ibant filiæ Israelitarum, ad confabulandum cum filia Jephthaci, quatuor diebus quotannis*: And so it is also set down in the marginal notes of our Translation. And from this annual concourse of the Daughters of *Israel*, it is not improbable in future Ages, the Daughter of *Jephtha* came to be worshipped as a Deity; and had by the *Samaritans* an annual festivity observed unto her honour, as *Epiphanius* hath left recorded in the Heresie of the *Melchisedecians*.

It is also repugnant unto Reason; for the offering of mankind was against the Law of God, who so abhorred humane sacrifice, that he admitted not the oblation of unclean beasts, and confined his Altars but unto few kinds of Animals, the Ox, the Goat, the Sheep, the Pigeon and its kinds: In the cleansing of the Leper, there is I confess mention made of the Sparrow; but great dispute may be made whether it be properly rendred. And therefore the Scripture with indignation oft-times makes mention of humane sacrifice among the *Gentiles*; whose oblations scarce made scruple of any Animal, sacrificing not only Man, but Horses, Lions, Eagles; and though they come not into holocausts, yet do we read the *Syrians* did make oblations of Fishes unto the Goddess *Derceto*. It being therefore a sacrifice so abominable unto God, although he had pursued it, it is not probable the Priests and Wisdom of *Israel* would have permitted it; and that not only in regard of the subject or sacrifice it self, but also the *Sacrificator*, which the Picture makes to be *Jephtha*; who was neither Priest, nor capable of that Office: for he was a *Gileadite*, and as the Text affirmeth, the Son also of an Harlot. And how hardly the Priest-hood would endure encroachment upon their function, a notable example there is in the story of *Ozias*.

Secondly, the offering up of his Daughter was not only unlawful, and entrenched upon his Religion, but had been a course that had much condemned his discretion; that is, to have punished himself in the strictest observance of his Vow, when as the Law of God had allowed an evasion; that is, by way of commutation or redemption, according as is determined, *Levit.* 27. Whereby if she were between the age of five and twenty, she was to be estimated but at ten shekels, and if between twenty and sixty, not above thirty. A summ that could never discourage an indulgent Parent; it being but the value of a servant slain; the inconsiderable Salary of *Judas*; and will make no greater noise than three pound fifteen shillings with us. And therefore their conceit is not to be exploded, who say that from the story of *Jephtha*'s sacrificing his own Daughter, might spring the fable of *Agamemnon*, delivering unto sacrifice his Daughter *Iphigenia*, who was also contemporary unto *Jephtha*: wherein to answer the ground that hinted it, *Iphigenia* was not sacrificed her self, but redeemed with an Hart, which *Diana* accepted for her.

Lastly, Although his Vow run generally for the words, *Whatsoever shall come forth*, &c. yet might it be restrained in the sense, for whatsoever was sacrificable, and justly subject to lawful immolation: and so would not have sacrificed either Horse or Dog, if they had come out upon him. Nor was he obliged by oath unto a strict observation of that which promissorily was unlawful; or could he be qualified by vow to commit a fact which naturally was abominable. Which doctrine had *Herod* understood, it might have saved *John Baptist*'s head; when he promised by oath to give unto *Herodias* whatsoever

whatsoever she would ask; that is, if it were in the compass of things, which he could lawfully grant. For his oath made not that lawful which was illegal before: and if it were unjust to murther *John*, the supervenient Oath did not extenuate the fact, or oblige the Juror unto it.

Now the ground at least which much promoted the opinion, might be the dubious words of the text, which contain the sense of his Vow; most Men adhering unto their common and obvious acception. *Whatsoever shall come forth of the doors of my House, shall surely be the Lord's, and I will offer it up for a burnt-offering.* Now whereas it is said, *Erit Jehovæ, & offeram illud holocaustum*, The word signifying both & and *aut*, it may be taken disjunctively; *aut offeram*, that is, it shall either be the Lord's by separation, or else, an holocaust by common oblation; even as our marginal translation advertiseth; and as *Tremellius* rendreth it, *Erit inquam Jehova, aut offeram illud holocaustum*: and for the vulgar translation, it useth often &, where *aut* must be presumed, as *Exod.* 21. *Si quis percusserit patrem & matrem*, that is, not both, but either. There being therefore two wayes to dispose of her, either to separate her unto the Lord, or offer her as a sacrifice, it is of no necessity the latter should be necessary; and surely less derogatory unto the sacred text and history of the people of God, must be the former.

CHAP. XV.

Of the Picture of John *the Baptist.*

THE Picture of *John* the Baptist, in a Camels skin, is very questionable, and many I perceive have condemned it. The ground or occasion of this description are the words of the holy Scripture, especially of *Matthew* and *Mark*, for *Luke* and *John* are silent herein; by them it is delivered, *his garment was of Camels Hair, and he had a leather girdle about his loins.* Now here it seems the Camels Hair is taken by Painters for the skin or pelt with the Hair upon it. But this Exposition will not so well consist with the strict acception of the words; for *Mark* 1. it is said, he was, ἐνδεδυμένος τρίχας καμήλου, and *Matthew* 3. εἶχε τὸ ἔνδυμα ἀπὸ τριχῶν καμήλου, that is, as the vulgar translation, that of *Beza*, that of *Sixtus Quintus*, and *Clement* the eighth hath rendred it, *vestimentum habebat è pilis camelinis*; which is as ours translateth it, *a garment of Camels hair*; that is, made of some texture of that Hair, a course garment; a cilicious or sackcloth habit; sutable to the austerity of his life; the severity of his Doctrine, Repentance; and the place thereof, the Wilderness, his food and diet, Locusts and wild Hony. Agreeable unto the example of *Elias*, who is said to be *vir pilosus*, that is, as *Tremellius* interprets, *Veste villosâ cinctus*, answerable unto the habit of the ancient Prophets, according to that of *Zachary*. *In that day the Prophets shall be ashamed, neither shall they wear a rough garment to deceive*; and sutable to the Cilicious and hairy Vests of the strictest Orders of Fryers, who derive the institution of their Monastick life from the example of *John* and *Elias*. 2. *Kings* 3. 18. *Zach.* 13.

As for the wearing of skins, where that is properly intended, the expression of the Scripture is plain; so is it said, *Heb.* 11. *They wandred about* ἐν αἰγείοις δέρμασιν, that is, *in Goats skins*; and so it is said of our first Parents, *Gen.* 3. That *God made them* χιτῶνας δερματίνους, *Vestes pelliceas* or *coats of skins*; which though a natural habit unto all, before the invention of Texture, was something more unto *Adam*, who had newly learned to die; for unto him a garment from the dead, was but a dictate of death, and an habit of mortality.

Now if any Man will say, this habit of *John* was neither of Camels skin, nor any course Texture of its hair, but rather some finer Weave of Camelot, Grograin or the like, in as much as these stuffs are supposed to be made of the hair of that Animal, or because that *Ælian* affirmeth, that Camels hair of *Persia*, is as fine as *Melesian* wool, wherewith the great ones of that place were cloathed; they have discovered an habit, not only unsutable unto his leathern cincture, and the courseness of his life; but not consistent with the words of our Saviour, when reasoning with the people concerning *John*, he saith, *What went you out into the wilderness to see? a Man cloathed in soft raiment? Behold, they that wear soft raiment, are in Kings Houses.*

CHAP. XVI.

Of the Picture of St. Christopher.

THE Picture of St. *Christopher*, that is, a Man of a Giantlike stature, bearing upon his shoulders our Saviour Christ, and with a staff in his Hand, wading throw the water, is known unto Children, common over all *Europe*, not only as a sign unto Houses, but is described in many Churches, and stands *Colossus* like in the entrance of *Noste Dame* in *Paris*.

Now from hence, common eyes conceive an history sutable unto this description, that he carried our Saviour in his Minority over some river or water: which notwithstanding we cannot at all make out. For we read not thus much in any good Author, nor of any remarkable *Christopher*, before the reign of *Decius*, who lived 250 years after Christ. This Man indeed according unto History suffered as a Martyr in the second year of that Emperour, and in the *Roman* Calendar takes up the 21 of *July*.

The ground that begat or promoted this opinion, was first the fabulous adjections of succeeding ages, unto the veritable acts of this Martyr, who in the most probable accounts was remarkable for his staff, and a Man of a goodly stature.

The second might be a mistake or misapprehension of the Picture, most Men conceiving that an History which was contrived at first but as an Emblem or Symbolical fancy: as from the Annotations of *Baronius* upon the *Roman* Martyrologie, *Lipellous* in the life of St. *Christopher* hath observed in these words; *Acta S. Christopheri à multis depravata inveniuntur: quod quidem non aliunde originem sumpsisse certum est, quàm quòd symbolicas figuras imperiti ad veritatem successu temporis transtulerint; itaque cuncta illa de Sancto Christophoro pingi consueta, Symbola potiùs quàm historia alicujus existimandum est esse expressam imaginem*; that is, The Acts of St. *Christopher* are depraved by many: which surely began from no other ground, than that in process of time, unskilful Men translated symbolical figures unto real verities: and therefore what is usually described in the Picture of St. *Christopher*, is rather to be received as an Emblem, or Symbolical description, than any real History. Now what Emblem this was, or what its signification, conjectures are many; *Pierius* hath set down one, that is, of the Disciple of Christ; for he that will carry Christ upon his shoulders, must rely upon the staff of his direction, whereon if he firmeth himself, he may be able to overcome the billows of resistance, and in the vertue of this staff, like that of *Jacob*, pass over the waters of *Jordan*. Or otherwise thus: He that will submit his shoulders unto Christ, shall by the concurrence of his power encrease into the strength of a Giant; and being supported by the staff of his Holy Spirit, shall not be overwhelmed by the waves of the world, but wade through all resistance.

Lip. *De vitis Sanctorum.*

Add also the mystical reasons of this pourtraict alledged by *Vida* and *Xerisanus*; & the recorded story of *Christopher*, that before his Martyrdom he requested

of

of God, that where ever his body were, the places ſhould be freed from peſtilence and miſchiefs, from infection. And therefore his picture or pourtract, was uſually placed in publick wayes, and at the entrance of Towns and Churches, according to the received Diſtich: *Anton. Caſtillionæi antiquitates Mediolanenſes.*

Chriſtophorum videas, poſtea tutus eris.

CHAP. XVII.

Of the Picture of St. George.

THE Picture of St. *George* killing the Dragon, and, as moſt ancient draughts do run, with the Daughter of a King ſtanding by, is famous amongſt Chriſtians. And upon this deſcription dependeth a ſolemn ſtory, how by this atchievement he redeemed a King's daughter: which is more eſpecially believed by the *Engliſh*, whoſe Protector he is: and in which form and Hiſtory, according to his deſcription in the *Engliſh* Colledge at *Rome*, he is ſet forth in the Icons or Cuts of Martyrs by *Cevalerius*: and all this according to the *Hiſtoria Lombardica*, or golden Legend of *Jacobus de Voragine*. Now of what authority ſoever this piece be amongſt us, it is I perceive received with different beliefs: for ſome believe the perſon and the ſtory; ſome the perſon, but not the ſtory; and others deny both.

That ſuch a perſon there was, we ſhall not contend: for beſides others, Dr. *Heylin* hath clearly aſſerted it in his Hiſtory of St. *George*. The indiſtinction of many in the community of name, or the miſapplication of the acts of one unto another, hath made ſome doubt thereof. For of this name we meet with more than one in Hiſtory, and no leſs than two conceived of *Cappadocia*. The one an *Arrian*, who was ſlain by the *Alexandrians* in the time of *Julian*; the other a valiant Souldier and Chriſtian Martyr, beheaded in the Reign of *Diocleſian*. This is the *George* conceived in this Picture, who hath his day in the *Roman* Calender, on whom ſo many fables are delivered, whoſe ſtory is ſet forth by *Metaphraſtes*, and his miracles by *Turonenſis*.

As for the ſtory depending hereon, ſome conceive as lightly thereof, as of that of *Perſius* and *Andromeda*; conjecturing the one to be the father of the other; and ſome too highly aſſert it. Others with better moderation, do either entertain the ſame as a fabulous addition unto the true and authentick ſtory of St. *George*; or elſe conceive the literal acception to be a miſconſtruction of the ſymbolical expreſſion; apprehending a veritable hiſtory, in an Emblem or piece of Chriſtian Poeſie. And this Emblematical conſtruction hath been received by Men not forward to extenuate the acts of Saints: as from *Baronius*, *Lipellous* the *Carthuſian* hath delivered in the life of St. *George*; *Picturam illam St* Georgii *quâ effingitur eques armatus, qui haſtæ cuſpide hoſtem interficit, juxta quam etiam virgo poſita manus ſupplices tendens ejus explorat auxilium, Symboli potiùs quàm hiſtoriæ alicujus cenſenda expreſſa imago. Conſuevit quidem ut equeſtris militiæ miles equeſtri imagine referri*: that is, The Picture of St. *George*, wherein he is deſcribed like a Curaſſier or Horſeman compleatly armed, *&c.* is rather a ſymbolical image, than any proper figure.

Now in the Picture of this Saint and Souldier, might be implied the Chriſtian Souldier, and true Champion of Chriſt. A Horſeman armed *Capite*, intimating the *Panoplia* or compleat Armour of a Chriſtian combating with the Dragon, that is, with the Devil; in defence of the Kings daughter, that is, the Church of God. And therefore although the Hiſtory be not made out, it doth not diſparage the Knights and noble Order of St. *George*: whoſe cogniſance is honourable in the Emblem of the Souldier of Chriſt, and is a worthy memorial to conform unto its myſtery. Nor, were

there no such person at all, had they more reason to be ashamed, than the Noble order of *Burgundy*, and Knights of the Golden Fleece; whose badge is a confessed fable.

CHAP. XVIII.

Of the Picture of Jerom.

THE Picture of *Jerom* usually described at his study, with a Clock hanging by, is not to be omitted; for though the meaning be allowable, and probable it is that industrious Father did not let slip his time without account; yet must not perhaps that Clock be set down to have been his measure thereof. For Clocks or Automatous organs, whereby we now distinguish of time, have found no mention in any ancient Writers, but are of late invention, as *Pancirollus* observeth. And *Polydore Virgil* discoursing of new inventions whereof the Authors are not known, makes instance in Clocks and Guns. Now *Jerom* is no late Writer, but one of the ancient Fathers, and lived in the fourth Century, in the Reign of *Theodosius* the first.

Clocks no very ancient invention.

It is not to be denied that before the days of *Jerom* there were Horologies, and several accounts of time; for they measured the hours not only by drops of water in glasses called *Clepsydræ*, but also by sand in glasses called *Clepsammia*. There were also from great antiquity, Scioterical or Sun-Dials, by the shadow of a stile or *gnomon* denoting the hours of the day: an invention ascribed unto *Anaximenes* by *Pliny*. Hereof a memorable one there was in *Campus Martius*, from an Obelisk erected, and golden figures placed horizontally about it; which was brought out of *Egypt* by *Augustus*, and described by *Jacobus Laurus*. And another of great antiquity we meet with in the story of *Ezechias*; for so it is delivered in 2 *King.* 20. That the *Lord brought the shadow backward ten degrees by which it had gone down in the dial of Ahaz.* That is, say some, ten degrees, not lines; for the hours were denoted by certain divisions or steps in the Dial, which others distinguished by lines, according to that of *Persius*,

A peculiar description and particular construction hereof out of R. *Chomer*, is set down, *Curios de Caffarel. chap. 9.*

Stertimus indomitum quod despumare Falernum
Sufficiat, quintâ dum linea tangitur umbra.

That is, the line next the Meridian, or within an hour of Noon.

Doctrine of circular motions.

Of later years there succeeded new inventions, and horologies composed by Trochilick or the artifice of wheels; whereof some are kept in motion by weight, others perform without it. Now as one age instructs another, and time that brings all things to ruin, perfects also every thing; so are these indeed of more general and ready use than any that went before them. By the Water-glasses the account was not regular: for from attenuation and condensation, whereby that Element is altered, the hours were shorter in hot weather than in cold, and in Summer than in Winter. As for Scioterical Dials, whether of the Sun or Moon, they are only of use in the actual radiation of those Luminaries, and are of little advantage unto those inhabitants, which for many months enjoy not the Lustre of the Sun.

It is I confess no easie wonder how the horometry of Antiquity discovred not this Artifice, how *Architas* that contrived the moving Dove, orather the *Helicosophie* of *Archimedes*, fell not upon this way. Surely as in many things, so in this particular, the present age hath far surpassed Antiquit; whose ingenuity hath been so bold not only to proceed below the account f minutes; but to attempt perpetual motions, and Engines whose revolutic (could their substance answer the design) might out-last the exemplary n bility, and out-measure time it self. For such a one is that mentioned

John Dee, whose words are these in his learned Preface unto *Euclid*: By Wheels strange works and incredible are done: A wondrous example was seen in my time in a certain Instrument, which by the Inventer and Artificer was sold for twenty Talents of Gold; and then by chance had received some injury, and one *Janellus* of *Cremona* did mend the same, and presented it unto the Emperor *Charles* the Fifth. *Jerowymus Cardanus* can be my witness, that therein was one Wheel that moved at such a rate, that in seven thousand years only his own period should be finished; a thing almost incredible, but how far I keep within my bounds, many Men yet alive can tell.

CHAP. XIX.

Of the Pictures of Mermaids, Unicorns, *and some others.*

FEW eyes have escaped the Picture of *Mermaids*; that is, according to *Horace* his Monster, with a Womans Head above, and fishy extremity below; and these are conceived to answer the shape of the ancient *Sirens* that attempted upon *Ulysses*. Which notwithstanding were of another description, containing no fishy composure, but made up of Man and Bird; the humane mediety variously placed not only above, but below; according unto *Ælian*, *Suidas*, *Servius*, *Boccatius*, and *Aldrovandus*, who hath referred their description unto the story of fabulous Birds; according to the description of *Ovid*, and the account thereof in *Hyginus*, that they were the daughters of *Melpomene*, and metamorphosed into the shape of Man and Bird by *Ceres*.

And therefore these pieces so common among us, do rather derive their original, or are indeed the very descriptions of *Dagon*; which was made with human figure above, and fishy shape below; whose stump, or, as *Tremellius* and our Margin renders it, whose fishy part only remained, when the hands and upper part fell before the Ark. Of the shape of *Artergates* or *Derceto* with the *Phœnicians*, in whose fishy and feminine mixture, as some conceive, were implied the Moon and the Sea, or the Deity of the Waters; and therefore, in their sacrifices, they made oblations of Fishes. From whence were probably occasioned the Pictures of *Nereides* and *Tritons* among the *Grecians*, and such as we read in *Macrobius*, to have been placed on the top of the Temple of *Saturn*.

Dagon the Idol, of what form. 1 *Sam.* 5.

We are unwilling to question the Royal Supporters of *England*, that is, the approved descriptions of the Lion and the Unicorn. Although, if in the Lion the position of the pizel be proper, and that the natural situation; it will be hard to make out their retrocopulation, or their coupling and pissing backward, acccording to the determination of *Aristotle*; All that urine backward do copulate πυγισὸν *clunatim*, or aversly, as Lions, Hares, Linxes.

As for the Unicorn, if it have the head of a Deer, and the tail of a Boar, as *Vertomannus* describeth it, how agreeable it is to this picture every eye may discern. If it be made bisulcous or cloven footed, it agreeth unto the description of *Vertomannus*, but scarce of any other; and *Aristotle* supposeth that such as divide the hoof, do also double the horn; they being both of the same Nature, and admitting division together. And lastly, if the horn have this situation and be so forwardly affixed, as is described, it will not be easily conceived, how it can feed from the ground; and therefore we observe, that Nature in other cornigerous animals, hath placed the Horns higher and reclining, as in Bucks; in some inverted upwards, as in the *Rhinoceros*, the *Indian* Ass, and Unicornous Beetles; and thus have some affirmed it is seated in this animal.

We cannot but observe that in the Picture of *Jonah* and others, Whales are described with two prominent spouts on their Heads; whereas indeed they

they have but one in the forehead, and terminating over the windpipe. Nor can we overlook the Picture of Elephants with Caſtles on their backs, made in the form of land Caſtles, or ſtationary fortifications, and anſwerable unto the Arms of *Caſtile*, or Sir *John Oldcaſtle*; whereas the towers they bore, were made of wood, and girt unto their bodies, as is delivered in the books of *Maccabees*, and as they were appointed in the Army of *Antiochus*.

Where the ſeven Stars be ſituated.

We will not diſpute the Pictures of Retiary Spiders, and their poſition in the Web, which is commonly made lateral, and regarding the Horizon, although, if obſerved, we ſhall commonly find it downward, and their heads reſpecting the Center. We will not controvert the Picture of the ſeven Stars; although if thereby be meant the *Hleiades*, or ſubconſtellation upon the back of *Taurus*, with what congruity they are deſcribed, either in ſite or magnitude, in a clear night an ordinary eye may diſcover, from *July* unto *April*. We will not queſtion the tongues of Adders and Vipers, deſcribed like an Anchor; nor the Picture of the Flower *de Luce*: though how far they agree unto their Natural draughts, let every Spectator determine.

2 *Chron.* 3. 13. Whether the Cherubims about the Ark be rightly deſcribed in the common Picture, that is, only in humane Heads, with two wings; or rather in the ſhape of Angels or young Men, or ſomewhat at leaſt with feet, as the Scripture ſeems to imply. Whether the Croſs ſeen in the air by *Conſtantine*, were of that figure wherein we repreſent it; or rather made out of X and P, the two firſt letters of χριστὸς. Whether the Croſs of Chriſt did anſwer the common figure; whether ſo far advanced above his head; whether the feet were ſo diſpoſed, that is, one upon another, or ſeparately nailed, as ſome with reaſon deſcribe it; we ſhall not at all contend. Much leſs whether the Houſe of *Diogenes* were a Tub framed of wood, and after the manner of ours, or rather made of earth, as learned Men conceive, and ſo more clearly make out that expreſſion of *Juvenal*. We ſhould be two critical to queſtion the letter Υ, or bicornous element of *Pythagoras*, that is, the making of the horns equal: or the left leſs than the right, and ſo deſtroying the Symbolical intent of the figure; confounding the narrow line of Vertue, with the larger road of Vice; anſwerable unto the narrow door of Heaven, and the ample gates of Hell, expreſſed by our Saviour, and not forgotten by *Homer*, in that Epithete of *Pluto*'s Houſe.

—— *Dolia magni non ardent Cynici*, &c.

Εὐρυπυλής.

Many more there are whereof our Pen ſhall take no notice, nor ſhall we urge their enquiry; we ſhall not enlarge with what incongruity, and how diſſenting from the pieces of Antiquity, the Pictures of their gods and goddeſſes are deſcribed, and how hereby their Symbolical ſenſe is loſt; although herein it were not hard to be informed from * *Phornutus*, † *Fulgentius*, and * *Albricus*. Whether *Hercules* be more properly deſcribed ſtrangling than tearing the Lion, as *Victorius* hath diſputed; nor how the characters and figures of the Signs and Planets be now perverted, as *Salmaſius* hath learnedly declared. We will diſpenſe with Bears with long tails, ſuch as are deſcribed in the figures of Heaven; We ſhall tolerate flying Horſes, black Swans, Hydra's, Centaures, Harpies and Satyrs, for theſe are monſtroſities, rarities, or elſe Poetical fancies, whoſe ſhadowed moralities requite their ſubſtantial falſities. Wherein indeed we muſt not deny a liberty; nor is the Hand of the Painter more reſtrainable than the Pen of the Poet. But where the real works of Nature, or veritable acts of ſtorie are to be deſcribed, digreſſions are aberrations; and Art being but the Imitator or ſecondary repreſentor, it muſt not vary from the verity of the example; or deſcribe things otherwiſe than they truly are or have been. For hereby introducing falſe Idea's of things, it perverts and deforms the face and ſymmetry of truth.

* *Phornut. De natura deorum.*
† *Fulg. mythologia.*
* *Albric. De deorum imaginibus.*

CHAP.

CHAP. XX.

Of the Hieroglyphical Pictures of the Egyptians.

CErtainly of all Men that ſuffered from the confuſion of *Babel*, the *Ægyptians* found the beſt evaſion; for, though words were confounded, they invented a language of things, and ſpake unto each other by common notions in Nature. Whereby they diſcourſed in ſilence, and were intuitively underſtood from the theory of their Expreſſes. For they aſſumed the ſhapes of animals common unto all eyes; and by their conjunctions and compoſitions were able to communicate their conceptions, unto any that coapprehended the Syntaxis of their Natures. This many conceive to have been the primitive way of writing, and of greater antiquity than letters; and this indeed might *Adam* well have ſpoken, who underſtanding the Nature of things, had the advantage of Natural expreſſions. Which the *Egyptians* but taking upon truſt, upon their own or common opinion; from conceded miſtakes they authentically promoted errors; deſcribing in their Hieroglyphicks creatures of their own invention; or from known and conceded animals, erecting ſignifications not inferrible from their Natures.

And firſt, Although there were more things in Nature, than words which did expreſs them; yet even in theſe mute and ſilent diſcourſes, to expreſs complexed ſignifications, they took a liberty to compound and piece together creatures of allowable forms into mixtures inexiſtent. Thus began the deſcriptions of Griphins, Baſilisks, Phœnix, and many more; which Emblematiſts and Heralds have entertained with ſignifications anſwering their inſtitutions; Hieroglyphically adding Martegres, Wivernes, Lion fiſhes, with divers others. Pieces of good and allowable invention unto the prudent Spectator, but are lookt on by vulgar eyes as literal truths, or abſurd impoſſibilities; whereas indeed, they are commendable inventions, and of laudable ſignifications.

Again, Beſide theſe pieces fictitiouſly ſet down, and having no Copy in Nature; they had many unqueſtionably drawn, of inconſequent ſignification, nor naturally verifying their intention. We ſhall inſtance but in few, as they ſtand recorded by *Orus*. The Male ſex they expreſſed by a Vultur, becauſe of Vulturs all are females, and impregnated by the wind; which authentically tranſmitted hath paſſed many pens, and became the aſſertion of *Ælian*, *Ambroſe*, *Baſil*, *Iſidore*, *Tzetzes*, *Philes*, and others. Wherein notwithſtanding what injury is offered unto the Creation in this confinement of ſex, & what diſturbance unto Philoſophy in the conceſſion of windy conceptions, we ſhall not here declare. By two drachms they thought it ſufficient to ſignifie an Heart; becauſe the Heart at one year weigheth two drachms, that is, a quarter of an ounce, and unto fifty years annually encreaſeth the weight of one drachm, after which in the ſame proportion it yearly decreaſeth; ſo that the life of a Man doth not naturally extend above an hundred. And this was not only a popular conceit, but conſentaneous unto their Phyſical principles, as *Heurnius* hath accounted it. In his *Philoſophia Barbarica.*

A woman that hath but one Child, they expreſs by a Lioneſs; for that conceiveth but once. Fecundity they ſet forth by a Goat, becauſe but ſeven dayes old, it beginneth to uſe coition. The abortion of a Woman they deſcribe by an Horſe kicking a Wolf; becauſe a Mare will caſt her foal if ſhe tread in the track of that animal. Deformity they ſignifie by a Bear; and an unſtable Man by an Hyæna, becauſe that animal yearly exchangeth its ſex. A Woman delivered of a female Child, they imply by a Bull looking over his left ſhoulder; becauſe if in coition a Bull part from a Cow on that ſide, the Calf will prove a female.

All

All which, with many more, how far they consent with truth, we shall not disparage our Reader to dispute; and though some way allowable unto wiser conceits, who could distinctly receive their significations; yet carrying the majesty of Hieroglyphicks, and so transmitted by Authors they crept into a belief with many, and favourable doubt with most. And thus, I fear, it hath fared with the Hieroglyphical Symbols of Scripture: which excellently intended in the species of things sacrificed, in the prohibited meats, in the dreams of *Pharaoh*, *Joseph*, and many other passages; are oft-times rackt beyond their symbolizations, and inlarg'd into constructions disparaging their true intentions.

CHAP. XXI.

Of the Picture of Haman *hanged.*

IN common draughts, *Haman* is hanged by the Neck upon an high Gibbet, after the usual and now practised way of suspension: but whether this description truly answereth the Original, Learned pens consent not, and good grounds there are to doubt. For it is not easily made out that this was an ancient way of Execution, in the publick punishment of Malefactors among the *Persians*; but we often read of Crucifixion in their Stories. So we find that *Oroetes* a *Persian* Governour crucified *Polycrates* the *Samian* Tyrant. And hereof we have an example in the life of *Artaxerxes* King of *Persia*; (whom some will have to be *Ahasuerus* in this Story) that his Mother *Paysatis* flea'd and crucified her *Eunuch*. The same also seems implied in the Letters Patent of King *Cyrus*. *Omnis qui hanc mutaverit jussionem, tollatur lignum de domo ejus, & erigatur, & configatur in eo.* In *Ezra* 6.

The same kind of punishment was in use among the *Romans*, *Syrians*, *Egyptians*, *Carthaginians* and *Grecians*. For though we find in *Homer*, that *Ulysses* in a fury hanged the Strumpets of those who courted *Penelope*, yet is it not so easie to discover, that this was the publick practice or open course of justice among the *Greeks*.

And even that the *Hebrews* used this present way of hanging, by illaqueation or pendulous suffocation, in publick justice and executions; the expressions and examples in Scripture conclude not beyond good doubt.

That the King of *Hai* was hanged, or destroyed by the common way of suspension, is not conceded by the learned *Masius* in his comment upon that text; who conceiveth thereby rather some kind of crucifixion; at least some patibulary affixion after he was slain; and so represented unto the people untill toward the evening.

Though we read in our translation, that *Pharaoh* hanged the chief Baker, yet learned Expositors understand hereby some kind of crucifixion, according to the mode of *Egypt*, whereby he exemplarily hanged out till the Fowls of the air fed on his Head or face, the first part of their prey being the eyes. And perhaps according to the signal draught hereof in a very old manuscript of *Genesis*, now kept in the Emperor's Library at *Vienna*; and accordingly set down by the learned *Petrus Zamberius*, in the second Tome of the description of that Library.

When the *Gibeonites* hanged the bodies of those of the House of *Saul*, thereby was intended some kind of crucifying, according unto good Expositors, and the vulgar translation; *crucifixerunt eos in monte coram domino.* Many both in Scripture and humane writers might be said to be crucified, though they did not perish immediately by crucifixion: But however otherwise destroyed, their bodies might be afterward appended or fastned unto some elevated engine, as exemplary objects unto the eyes of the people:

So

So sometimes we read of the crucifixion of only some part, as of the Heads of *Julianus* and *Albinus*, though their Bodies were cast away.

That legal Text which seems to countenance the common way of hanging, if a Man hath committed a sin worthy of Death, and they hang him on a Tree; is not so received by Christian and Jewish Expositors. And as a good Annotator of ours delivereth, out of *Maimonides*: The *Hebrews* understand not this of putting him to death by hanging, but of hanging of a Man after he was stoned to Death; and the manner is thus described. After he is stoned to death, they fasten a piece of Timber in the Earth, and out of it there cometh a piece of Wood, and then they tie both his Hands one to another, and hang him unto the setting of the Sun. *Deut.* 21. *Ainsworth.*

Beside, the Original word *Hakany* determineth not the doubt. For that by *Lexicographers* or *Dictionary* Interpreters, is rendred suspension and crucifixion; there being no *Hebrew* word peculiarly and fully expressing the proper word of crucifixion, as it was used by the *Romans*; nor easie to prove it the custom of the *Jewish* Nation to nail them by distinct parts unto a Cross, after the manner of our Saviour crucified: wherein it was a special favour indulged unto *Joseph* to take down the Body.

Lipsius lets fall a good caution to take off doubts about suspension delivered by ancient Authors, and also the ambiguous sence of κρεμάσαι among the *Greeks*. *Tale apud Latinos ipsum suspendere, quod in crucem referendum moneo juventutem*; as that also may be understood of *Seneca*, *Latrocinium fecit aliquis, quid ergo meruit? ut suspendatur.* And this way of Crucifying he conceiveth to have been in general use among the *Romans*, until the latter days of *Constantine*, who in reverence unto our Saviour abrogated that opprobrious and infamous way of Crucifixion. Whereupon succeeded the common and now practised way of suspension.

But long before this abrogation of the Cross, the *Jewish* Nation had known the true sense of Crucifixion: whereof no Nation had a sharper apprehension, while *Adrian* crucified five hundred of them every day, until Wood was wanting for that service. So that they which had nothing but *Crucify* in their mouths, were therewith paid home in their own Bodies: Early suffering the reward of their imprecations, and properly in the same kind.

CHAP. XXII.

Compendiously of many questionable Customs, Opinions, Pictures, Practices, and Popular Observations.

1. IF an Hare cross the High-way, there are few above threescore years that are not perplexed thereat: which notwithstanding is but an Augurial terror, according to that received expression, *Inauspicatum dat iter oblatus Lepus.* And the ground of the conceit was probably no greater than this, That a fearful Animal passing by us, portended unto us some thing to be feared: as upon the like consideration, the meeting of a Fox presaged some future Imposture; which was a superstitious observation prohibited unto the *Jews*, as is expressed in the Idolatry of *Maimonides*, and is referred unto the sin of an observer of Fortunes, or one that abuseth events unto good or bad signs; forbidden by the Law of *Moses*; which notwithstanding sometimes succeeding, according to fears or desires, have left impressions and timorous expectations in credulous minds for ever. *Deut.* 18. The ground of many vain observations.

2. That Owls and Ravens are ominous appearers, and pre-signifying unlucky events, as Christians yet conceit, was also an Augurial conception.

Becauſe many Ravens were ſeen when *Alexander* entred *Babylon*, they were thought to pre-ominate his death; and becauſe an Owl appeared before the Battle, it preſaged the ruin of *Craſſus*. Which though decrepit ſuperſtitions, and ſuch as had their nativity in times beyond all Hiſtory, are freſh in the obſervation of many Heads, and by the credulous and feminine party ſtill in ſome Majeſty among us. And therefore the Emblem of Superſtition was well ſet out by *Ripa*, in the Picture of an Owl, an Hare, and an old Woman. And it no way confirmeth the Augurial conſideration, that an Owl is a forbidden food in the Law of *Moſes*; or that *Jeruſalem* was threatned by the Raven and the Owl, in that expreſſion of *Iſai.* 34. That it ſhould be *a court for Owls, that the Cormorant and the Bittern ſhould poſſeſs it, and the Owl and the Raven dwell in it.* For thereby was only implied their enſuing deſolation, as is expounded in the words ſucceeding: He ſhall draw upon it the line of confuſion, and the ſtones of emptineſs.

The Emblem of ſuperſtition. *Iconologia de Cæſare. Ripa.*

3. The falling of Salt is an authentick preſagement of ill-luck, nor can every temper contemn it; from whence notwithſtanding nothing can be naturally feared: nor was the ſame a general prognoſtick of future evil among the Ancients, but a particular omination concerning the breach of friendſhip. For Salt as incorruptible, was the Symbol of friendſhip, and before the other ſervice was offered unto their gueſts; which if it caſually fell, was accounted ominous, and their amity of no duration. But whether Salt were not only a Symbol of friendſhip with Man, but alſo a figure of amity and reconciliation with God, and was therefore obſerved in Sacrifices, is an higher ſpeculation.

4. To break the Egg-ſhell after the Meat is out, we are taught in our Childhood, and practiſe it all our lives; which nevertheleſs is but a ſuperſtitious relique, according to the judgment of *Pliny*. *Huc pertinet ovorum, ut exſorbuerit quiſque, calices protinus frangi, aut eoſdem cochlearibus perforari*; and the intent hereof was to prevent witchcraft; for leſt Witches ſhould draw or prick their names therein, and veneficiouſly miſchief their perſons, they broke the ſhell, as *Dalecampius* hath obſerved.

5. The true Lovers knot is very much magnified, and ſtill retained in Preſents of Love among us; which though in all points it doth not make out, had perhaps its Original from the *Nodus Herculanus*, or that which was called *Hercules* his knot, reſembling the ſnaky complication in the *Caduceus* or rod of *Hermes*; and in which form the Zone or woollen Girdle of the Bride was faſtned, as *Turnebus* obſerveth in his *Adverſaria*.

6. When our Cheek burneth or Ear tingleth, we uſually ſay that ſome Body is talking of us, which is an ancient conceit, and ranked among ſuperſtitious opinions by *Pliny*. *Abſentes tinnitu aurium præſentire ſermones de ſe, receptum eſt*, according to that Diſtich noted by *Dalecampius*.

Garrula quid totis reſonas mihi noctibus auris?
Neſcio quem dicis nunc meminiſſe mei.

Which is a conceit hardly to be made out without the conceſſion of a ſignifying *Genius*, or univerſal *Mercury*; conducting ſounds unto their diſtant ſubjects, and teaching us to hear by touch.

7. When we deſire to confine our words, we commonly ſay they are ſpoken under the Roſe; which expreſſion is commendable, if the Roſe from any natural property may be the Symbol of ſilence, as *Nazianzen* ſeems to imply in theſe tranſlated Verſes:

The Original of the Proverb, *under the Roſe be it*, &c.

Utque latet Roſa Verna ſuo putamine clauſa,
Sic os vincla ferat, validiſque arctetur habenis,
Indicátque ſuis prolixa ſilentia labris:

And is alſo tolerable, if by deſiring a ſecrecy to words ſpoken under the Roſe, we only mean in ſociety and comporation, from the ancient cuſtom in Sympoſiack meetings, to wear Chaplets of Roſes about their Heads: and ſo

we

we condemn not the *German* cuſtom, which over the Table deſcribeth a Roſe in the Cieling. But more conſiderable it is, if the Original were ſuch as *Lemnius* and others have recorded, That the Roſe was the flower of *Venus*, which *Cupid* conſecrated unto *Harpocrates* the God of ſilence, and was therefore an Emblem thereof, to conceal the pranks of Venery; as is declared in this Tetraſtich:

Eſt Roſa flos Veneris, cujus quò facta laterent,
Harpocrati matris, dona dicavit Amor;
Inde Roſam menſis hoſpes ſuſpendit Amicis,
Convivæ ut ſub eâ dicta tacenda ſciant.

8. That Smoak doth follow the faireſt, is an uſual ſaying with us, and in many parts of *Europe*; whereof although there ſeem no natural ground, yet is it the continuation of a very ancient opinion, as *Petrus Victorius* and *Caſaubon* have obſerved from a paſſage in *Athenæus*: wherein a *Paraſite* thus deſcribeth himſelf:

To every Table firſt I come,
Whence Porridge I am call'd by ſome:
A Capaneus *at Stairs I am,*
To enter any Room a Ram;
Like Whips and Thongs to all I ply;
Like Smoak unto the Fair I fly.

9. To ſit croſs-Leg'd, or with our Fingers pectinated or ſhut together, is accounted bad, and Friends will perſwade us from it. The ſame conceit religiouſly poſſeſſed the Ancients, as is obſervable from *Pliny*. *Poplites alternis genibus imponere nefas olim*: and alſo from *Athenæus*, that it was an old veneficious practice, and *Juno* is made in this poſture to hinder the delivery of *Alcmena*. And therefore, as *Pierius* obſerveth, in the Medal of *Julia Pia*, the right-hand of *Venus* was made extended with the Inſcription of *Venus Genitrix*; for the complication or pectination of the Fingers was an Hieroglyphick of impediment, as in that place he declareth.

10. The ſet and ſtatary times of pairing of Nails, and cutting of Hair, is thought by many a point of conſideration; which is perhaps but the continuation of an ancient ſuperſtition. For piaculous it was unto the *Romans* to pare their Nails upon the *Nundinæ*, obſerved every ninth day; and was alſo feared by others in certain days of the week; according to that of *Auſonius*, *Ungues Mercurio, Barbam Jove, Cypride Crines*; and was one part of the wickedneſs that filled up the meaſure of *Manaſſes*, when 'tis delivered that he obſerved times. 1 *Chron.* 35.

11. A common faſhion it is to nouriſh Hair upon the Moles of the Face; which is the perpetuation of a very ancient cuſtom; and though innocently practiſed among us, may have a ſuperſtitious Original, according to that of *Pliny*, *Nævos in facie tondere religioſum habent nunc multi*. From the like might proceed the fears of poling Elvelocks or complicated Hairs of the Head, and alſo of Locks longer than the other Hair; they being votary at firſt, and dedicated upon occaſion; preſerved with great care, and accordingly eſteemed by others, as appears by that of *Apuleius*, *Adjuro per dulcem capilli tui nodulum*.

12. A cuſtom there is in moſt parts of *Europe* to adorn Aqueducts, Spouts and Ciſterns with Lions Heads: which though no illaudable Ornament, is of an *Egyptian* Genealogy, who practiſed the ſame under a ſymbolical illation. For becauſe the Sun being in *Leo*, the Flood of *Nilus* was at the full, and Water became conveyed into every part, they made the Spouts of their Aqueducts through the Head of a Lion. And upon ſome Cœleſtial reſpects it is not improbable the great Mogul or *Indian* King doth bear for his Arms a Lion and the Sun.

Symbolical significations of the Girdle.

13. Many conceive there is somewhat amiss, and that as we usually say, they are unblest, until they put on their Girdle. Wherein (although most know not what they say) there are involved unknown considerations. For by a Girdle or cincture are symbolically implied Truth, Resolution, and Readiness unto action, which are parts and vertues required in the service of God. According whereto we find that the *Israelites* did eat the Paschal Lamb with their loyns girded; and the Almighty challenging *Job*, bids him gird up his loyns like a man. So runneth the expression of *Peter*, *Gird up the loyns of your minds, be sober and hope to the end*: so the high Priest was *girt with the girdle of fine linnen*: so is it part of the holy habit to have our loyns girt about with truth; and so is it also said concerning our Saviour, *Righteousness shall be the girdle of his loyns, and faithfulness the girdle of his reins.*

Isa. 11.

Moreover by the Girdle, the heart and parts which God requires are divided from the inferior and concupiscential organs; implying thereby a *memento*, unto purification and cleanness of heart, which is commonly defiled from the concupiscence and affection of those parts; and therefore unto this day the *Jews* do bless themselves when they put on their zone or cincture. And thus may we make out the Doctrine of *Pythagoras*, to offer sacrifice with our feet naked, that is, that our inferior parts and fartherest removed from reason might be free, and of no impediment unto us. Thus *Achilles*, though dipped in *Styx*, yet having his heel untouched by that water; although he were fortified elsewhere, he was slain in that part, as only vulnerable in the inferior and brutal part of Man. This is that part of *Eve*, and her posterity, the Devil still doth bruise, that is, that part of the soul which adhereth unto earth, and walks in the paths thereof. And in this secundary and symbolical sense it may be also understood, when the Priests in the Law washed their feet before the sacrifice; when our Saviour washed the feet of his Disciples, and said unto *Peter*, *If I wash not thy feet, thou hast no part in me.* And thus is it symbolically explainable, and implieth purification and cleanness, when in the burnt-offerings the Priest is commanded to wash the inwards and legs thereof in water; and in the peace and sin-offerings, to burn the two Kidneys, the fat which is about the flanks, and as we translate it, the Caul above the Liver. But whether the *Jews* when they blessed themselves, had any eye unto the words of *Jeremy*, wherein God makes them his Girdle; or had therein any reference unto the Girdle, which the Prophet was commanded to hide in the hole of the rock of *Euphrates*, and which was the type of their captivity, we leave unto higher conjecture.

Jer. 13.

Certain *Hereticks* who ascribed Humane figure unto God, after which they conceived he created man in his likeness.

14. The Picture of the Creator, or God the Father in the shape of an old Man, is a dangerous piece, and in this Fecundity of sects may revive the *Anthropomorphites*. Which although maintained from the expression of *Daniel*, *I beheld where the Ancient of days did sit, whose hair of his head was like the pure wool*; yet may it be also derivative from the Hieroglyphical description of the *Ægyptians*; who to express their Eneph, or Creator of the world, described an old man in a blue mantle, with an egg in his mouth; which was the Emblem of the world. Surely those Heathens, that notwithstanding the Exemplary advantage in Heaven, would endure no pictures of Sun or Moon, as being visible unto all the world, and needing no representation; do evidently accuse the practice of those pencils, that will describe Invisibles. And he that challenged the boldest hand unto the picture of an Echo, must laugh at this attempt, not only in the description of Invisibility, but circumscription of Ubiquity, and fetching under lines incomprehensible circularity.

The Pictures of the *Ægyptians* were more tolerable, and in their sacred letters more veniably expressed the apprehension of Divinity. For though they implied the same by an eye upon a Scepter, by an Eagles head, a Crocodile, and the like: yet did these manual descriptions pretend no corporal representations; nor could the people misconceive the same unto real correspondencies. So though the Cherub carried some apprehension of Divinity, yet was it not conceived to be the shape thereof: and so perhaps because it is metaphorically predicated of God, that he is a consuming fire, he may be harmlessly described by a flaming representation; Yet if, as some will have it, all

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mediocrity of folly is fooliſh, and becauſe an unrequitable evil may enſue, an indifferent convenience muſt be omitted; we ſhall not urge ſuch repreſentments; we could ſpare the holy Lamb for the Picture of our Saviour, and the Dove or fiery Tongues to repreſent the Holy Ghoſt.

15. The Sun and Moon are uſually deſcribed with humane faces; whether herein there be not a *Pagan* imitation, and thoſe viſages at firſt implied *Apollo* and *Diana*, we may make ſome doubt; and we find the ſtatue of the Sun was framed with raies about the head, which were the indeciduous and unſhaven locks of *Apollo*. We ſhould be too *Iconomical to queſtion the pictures of the winds, as commonly drawn in humane heads, and with their cheeks diſtended; which notwithſtanding we find condemned by *Minutius*, as anſwering Poetical fancies, and the gentile deſcription of *Æolus*, *Boreas*, and the feigned Deities of Winds.

* Or quarrelſome with Pictures. Dion. *Ep.* 7. a. *ad Policar. & Pet. Hall. not. in vit. S. Dionyſ.*

16. We ſhall not, I hope, diſparage the Reſurrection of our Redeemer, if we ſay the Sun doth not dance on *Eaſter-day*. And though we would willingly aſſent unto any ſympathetical exultation, yet cannot conceive therein any more than a Tropical expreſſion. Whether any ſuch motion there were in that day wherein Chriſt aroſe, Scripture hath not revealed, which hath been punctual in other records concerning Solary miracles; and the *Areopagite* that was amazed at the Eclipſe, took no notice of this. And if metaphorical expreſſions go ſo far, we may be bold to affirm, not only that one Sun danced, but two aroſe that day: That light appeared at his Nativity, and darkneſs at his death, and yet a light at both; for even that darkneſs was a light unto the *Gentiles*, illuminated by that obſcurity. That 'twas the firſt time the Sun ſet above the Horizon; that although there were darkneſs above the earth, there was light beneath it, nor dare we ſay that Hell was dark if he were in it.

17. Great conceits are raiſed of the involution or membranous covering, commonly called the Silly-how, that ſometimes is found about the heads of children upon their birth; and is therefore preſerved with great care, not only as medical in diſeaſes, but effectual in ſucceſs, concerning the Infant and others; which is ſurely no more than a continued ſuperſtition. For hereof we read in the life of *Antoninus* delivered by *Spartianus*, that children are born ſometimes with this natural cap; which Midwives were wont to ſell unto credulous Lawyers, who had an opinion it advantaged their promotion.

But to ſpeak ſtrictly, the effect is natural, and thus may be conceived; Animal conceptions have (largely taken) three teguments, or membranous films which cover them in the womb, that is, the *Chorion*, *Amnios*, and *Allantois*; the *Chorion* is the outward membrance wherein are implanted the Veins, Arteries and umbilical veſſels, whereby its nouriſhment is conveyed: the *Allantois* a thin coat ſeated under the *Chorion*, wherein are received the watery ſeparations conveyed by the *Urachus*, that the acrimony thereof ſhould not offend the skin. The *Amnios* is a general inveſtment, containing the ſudorous or thin ſeroſity perſpirable through the skin. Now about the time when the Infant breaketh theſe coverings, it ſometime carrieth with it about the head a part of the *Amnios* or neareſt coat; which, ſaith *Spigelius*, either proceedeth from the toughneſs of the membrance or weakneſs of the Infant that cannot get clear thereof. And therefore herein ſignifications are natural and concluding upon the Infant, but not to be extended unto magical ſignalities, or any other perſon.

De formato fœtu.

18. That 'tis good to be drunk once a month, is a common flattery of ſenſuality, ſupporting it ſelf upon Phyſick, and the healthful effects of inebriation. This indeed ſeems plainly affirmed by *Avicenna*, a Phyſician of great authority, and whoſe religion prohibiting Wine, could leſs extenuate ebriety. But *Averroes* a man of his own faith, was of another belief; reſtraining his ebriety unto hilarity, and in effect making no more thereof than *Seneca* commendeth, and was allowable in *Cato*; that is, a ſober incaleſcence and regulated æſtuation from wine; or what may be conceived between *Joſeph* and his Brethren, when the Text expreſſeth they were merry, or drank largely, and whereby indeed the commodities ſet down by *Avicenna*, that is, alleviation

tion of ſpirits, reſolution of ſuperfluities, provocation of ſweat and urine, may alſo enſue. But as for dementation, ſopition of reaſon, and the diviner particle from drink; though *American* Religion approve, and *Pagan* piety of old hath practiſed it, even at their ſacrifices; Chriſtian morality and the Doctrine of Chriſt will not allow. And ſurely that Religion which excuſeth the fact of *Noah*, in the aged ſurprizal of ſix hundred years, and unexpected inebriation from the unknown effects of wine, will neither acquit ebrioſity nor ebriety, in their known and intended perverſions.

And indeed, although ſometimes effects ſucceed which may relieve the body, yet if they carry miſchief or peril unto the ſoul, we are therein reſtrainable by Divinity, which circumſcribeth Phyſick, and circumſtantially determines the uſe thereof. From natural conſiderations, Phyſick commendeth the uſe of Venery; and haply, Inceſt, Adultery, or ſtupration may prove as Phyſically advantageous, as conjugal copulation; which notwithſtanding muſt not be drawn into practice. And truly effects, conſequents, or events which we commend, ariſe oft-times from ways which we all condemn. Thus from the fact of *Lot*, we derive the generation of *Ruth*, and bleſſed Nativity of our Saviour; which notwithſtanding did not extenuate the inceſtuous ebriety of the generator. And if, as is commonly urged, we think to extenuate ebriety from the benefit of vomit oft ſucceeding, *Egyptian* ſobriety will condemn us, which purged both ways twice a month, without this perturbation: and we fooliſhly contemn the liberal hand of God, and ample field of medicines which ſoberly produce that action.

Why the Devil is commonly ſaid to appear with a cloven foot.

9. A conceit there is, that the Devil commonly appeareth with a cloven hoof: wherein although it ſeem exceſſively ridiculous, there may be ſomewhat of truth; and the ground thereof at firſt might be his frequent appearing in the ſhape of a Goat, which anſwers that deſcription. This was the opinion of ancient Chriſtians concerning the apparition of Panites, Fauns, and Satyrs; and in this form we read of one that appeared unto *Antony* in the Wilderneſs. The ſame is alſo confirmed from Expoſitions of Holy Scripture; for whereas it is ſaid, *Thou ſhalt not offer unto Devils*, the Original word is *Seghnirim*, that is, rough and hairy Goats, becauſe in that ſhape the Devil moſt often appeared: as is expounded by the *Rabbins*, as *Tremellius* hath alſo explained: and as the word *Aſcimah*, the god of *Emath*, is by ſome conceived. Nor did he only aſſume this ſhape in elder times, but commonly in latter times, eſpecially in the place of his worſhip, if there be any truth in the confeſſion of Witches, and as in many ſtories it ſtands confirmed by *Bodinus*. And therefore a Goat is not improperly made the Hieroglyphick of the Devil, as *Pierius* hath expreſſed it. So might it be the Emblem of ſin, as it was in the ſin-offering: and ſo likewiſe of wicked and ſinful men, according to the expreſſion of Scripture in the method of the laſt diſtribution: when our Saviour ſhall ſeparate the Sheep from the Goats, that is, the Sons of the Lamb from the children of the Devil.

Levit. 17.

In his *Dæmonomania.*

CHAP.

CHAP. XXIII.

Of some others.

1. THAT temperamental dignotions, and conjecture of prevalent humours, may be collected from spots in our Nails, we are not averse to concede. But yet not ready to admit sundry divinations, vulgarly raised upon them. Nor do we observe it verified in others, what *Cardan* discovered as a property in himself: to have found therein some signs of most events that ever happened unto him. Or that there is much considerable in that doctrine of Cheiromancy, that spots in the top of the Nails do signifie things past; in the middle, things present; and at the bottom, events to come. That White specks presage our felicity; Blue ones our misfortunes. That those in the Nail of the Thumb have significations of honour, those in the fore-Finger, of riches, and so respectively in other Fingers, (according to Planetical relations, from whence they receive their names) as *Tricassus* hath taken up, and *Picciolus* well rejecteth. *De varietate rerum.* *De inspectione manûs.*

We shall not proceed to querie, what truth there is in Palmistry, or divination from those lines in our Hands, of high denomination. Although if any thing be therein, it seems not confinable unto Man; but other Creatures are also considerable; as is the fore-foot of the Mole, and especially of the Monkey; wherein we have observed the Table-line, that of Life, and of the Liver.

2. That Children committed unto the School of Nature, without institution, would naturally speak the Primitive Language of the World, was the opinion of ancient Heathens, and continued since by Christians: who will have it our *Hebrew* Tongue, as being the Language of *Adam*. That this were true, were much to be desired, not only for the easie attainment of that useful Tongue, but to determine the true and primitive *Hebrew*. For whether the present *Hebrew* be the unconfounded Language of *Babel*, and that which remaining in *Heber*, was continued by *Abraham* and his posterity; or rather the Language of *Phœnicia* and *Canaan*, wherein he lived, some learned Men I perceive do yet remain unsatisfied. Although I confess probability stands fairest for the former: nor are they without all reason, who think that at the confusion of Tongues, there was no constitution of a new Speech in every Family, but a variation and permutation of the old; out of one common Language raising several Dialects: the Primitive Tongue remaining still intire. Which they who retained, might make a shift to understand most of the rest. By vertue whereof in those Primitive times and greener confusions, *Abraham* of the Family of *Heber* was able to converse with the *Chaldeans*, to understand *Mesopotamians*, *Canaanites*, *Philistins*, and *Egyptians*: whose several Dialects he could reduce unto the Original and Primitive Tongue, and so be able to understand them. How *Abraham* might understand the Language of several Nations.

3. Though useless unto us, and rather of molestation, we commonly refrain from killing Swallows, and esteem it unlucky to destroy them: whether herein there be not a *Pagan* Relique, we have some reason to doubt. For we read in *Ælian*, that these Birds were sacred unto the *Penates* or Household-gods of the ancients, and therefore were preserved. The same they also honoured as the Nuncio's of the Spring; and we find in *Athenæus* that the *Rhodians* had a solemn Song to welcome in the Swallaw. The same is extant in the 8th. of *Athenæus*.

4. That Candles and Lights burn dim and blue at the apparition of Spirits, may be true, if the ambient air be full of sulphureous spirits, as it happeneth oft-times in Mines; where damps and acid exhalations are able to extinguish them. And may be also verified, when Spirits do make themselves visible by bodies of such effluviums. But of lower consideration is the common fore-telling of strangers, from the fungous parcels about the Wieks Why Candles may burn blue, before the apparition of a Spirit.

Wieks of Candles: which only ſignifieth a moiſt and pluvious air about them, hindering the avolation of the light and favillous Particles: whereupon they are forced to ſettle upon the Snaſt.

5. Though Coral doth properly preſerve and faſten the Teeth in Men, yet is it uſed in Children to make an eaſier paſſage for them: and for that intent is worn about their Necks. But whether this cuſtom were not ſuperſtitiouſly founded, as preſumed an amulet or defenſative againſt faſcination, is not beyond all doubt. For the ſame is delivered by *Pliny*. *Aruſpices religioſum Coralli geſtamen amoliendis periculis arbitrantur; & furculi infantia alligati, tutelam habere creduntur.*

Lib. 32.

6. A ſtrange kind of exploration and peculiar way of Rhabdomancy is that which is uſed in mineral diſcoveries; that is, with a forked Hazel, commonly called *Moſes* his Rod, which freely held forth, will ſtir and play if any Mine be under it. And though many there are who have attempted to make it good, yet until better information, we are of opinion with *Agricola*, that in it ſelf it is a fruitleſs exploration, ſtrongly ſcenting of *Pagan* derivation, and the *virgula Divina*, provetbially magnified of old. The ground whereof were the Magical Rods in Poets, that of *Pallas* in *Homer*; that of *Mercury* that charmed *Argus*, and that of *Circe* which transformed the followers of *Ulyſſes*. Too boldly uſurping the name of *Moſes* Rod, from which notwithſtanding, and that of *Aaron*, were probably occaſioned the fables of all the reſt. For that of *Moſes* muſt needs be famous unto the *Ægyptians*; and that of *Aaron* unto many other Nations, as being preſerved in the Ark, until the deſtruction of the Temple built by *Solomon*.

De re metallica, lib. 2.

7. A practice there is among us to determine doubtful matters, by the opening of a Book, and letting fall a Staff; which notwithſtanding are ancient fragments of *Pagan* divinations. The firſt an imitation of *Sortes Homericæ*, or *Virgilianæ*, drawing determinations from Verſes caſually occurring. The ſame was practiſed by *Severus*, who entertained ominous hopes of the Empire, from that Verſe in *Virgil*, *Tu regere imperio populos Romane memento*; and *Cordianus* who reigned but few days was diſcouraged by another; that is, *Oſtendunt terris hunc tantùm fata, nec ultra Eſſe ſinunt.* Nor was this only performed in Heathen Authors, but upon the Sacred Text of Scripture, as *Gregorius Turonenſis* hath left ſome account; and as the practice of the Emperor *Heraclius*, before his Expedition into *Aſia* minor, is delivered by *Cedrenus*.

As for the divination or deciſion from the Staff, it is an Augurial relique, and the practice thereof is accuſed by God himſelf; *My people ask counſel of their ſtocks, and their ſtaff declareth unto them.* Of this kind of Rhabdomancy was that practiſed by *Nabuchadonozor* in that *Chaldean* miſcellany, delivered by *Ezekiel*; *The King of Babylon ſtood at the parting of the way, at the head of two ways to uſe divination, he made his arrows bright, he conſulted with Images, he looked in the liver; at the right hand were the divinations of Jeruſalem.* That is, as *Eſtius* expounded it, The left way leading unto *Rabbah*, the chief City of the *Ammonites*, and the right unto *Jeruſalem*, he conſulted *Idols* and Entrals, he threw up a bundle of Arrows to ſee which way they would light; and falling on the right hand he marched towards *Jeruſalem*. A like way of Belomancy or Divination by Arrows hath been in requeſt with *Scythians*, *Alanes*, *Germans*, with the *Africans* and *Turks* of *Algier*. But of another nature was that which was practiſed by *Eliſha*, when by an Arrow ſhot from an Eaſtern-window, he pre-ſignified the deſtruction of *Syria*; or when according unto the three ſtroaks of *Joaſh*, with an Arrow upon the ground, he foretold the number of his victories. For thereby the ſpirit of God particular'd the ſame; and determined the ſtroaks of the King, unto three, which the hopes of the Prophet expected in twice that number.

Hoſea 4.

Ezek. 24.

2 *King.* 13, 15.

8. We cannot omit to obſerve, the tenacity of ancient cuſtoms, in the nominal obſervation of the ſeveral days of the week, according to *Gentile* and *Pagan* appellations: for the Original is very high, and as old as the ancient *Ægyptians*, who named the ſame according to the ſeven Planets, the

Dion. Caſſii lib. 37.

the admired Stars of Heaven, and reputed Deities among them. Unto every one assigning a several day; not according to their cœlestial order, or as they are disposed in Heaven; but after a *diatesseron* or musical fourth. For beginning *Saturday* with *Saturn*, the supreamest Planet, they accounted by *Jupiter* and *Mars* unto *Sol*, making *Sunday*. From *Sol* in like manner by *Venus* and *Mercury* unto *Luna*, making *Munday*; and so through all the rest. And the same order they confirmed by numbring the hours of the day unto twenty four, according to the natural order of the Planets. For beginning to account from *Saturn*, *Jupiter*, *Mars*, and so about unto twenty four, the next day will fall unto *Sol*; whence accounting twenty four, the next will happen unto *Luna*, making *Munday*. And so with the rest, according to the account and order observed still among us.

The *Jews* themselves in their Astrological considerations, concerning Nativities, and Planetary hours, observe the same order, upon as witty foundations. Because by an equal interval, they make seven Triangles, the Bases whereof are the seven sides of a Septilateral Figure, described within a Circle. That is, If a Figure of seven sides be described in a Circle, and at the Angles thereof the Names of the Planets be placed, in their natural order on it: if we begin with *Saturn*, and successively draw Lines from Angle to Angle, until seven equicrural Triangles be described, whose Bases are the seven sides of the Septilateral Figure; the Triangles will be made by this order. The first being made by *Saturn*, *Sol* and *Luna*, that is, *Saturday*, *Sunday*, and *Munday*; and so the rest in the order still retained.

Cujus Icon apud doct. Gaffarel. cap. 11. Et Fabrit. Pad.

But thus much is observable, that however in cœlestial considerations they embraced the received order of the Planets, yet did they not retain either Characters, or Names in common use amongst us; but declining humane denominations, they assigned them names from some remarkable qualities; as is very observable in their red and splendent Planets, that is, of *Mars* and *Venus*. But the change of their Names disparaged not the consideration of their natures; nor did they thereby reject all memory of these remarkable Stars; which God himself admitted in his Tabernacle, if conjecture will hold concerning the Golden Candlestick, whose Shaft resembled the Sun, and six branches the Planets about it.

Maadim Nogah.

9. We are unwilling to enlarge concerning many other; only referring unto sober examination, what natural effects can reasonably be expected, when to prevent the *Ephialtes* or Night-Mare, we hang up an hollow Stone in our Stables; when for Amulets against Agues we use the chips of Gallows and places of execution. When for Warts we rub our hands before the Moon, or commit any maculated part unto the touch of the dead. What truth there is in those common female Doctrines, that the first Rib of Roast Beef powdered is a peculiar remedy against Fluxes. That to urine upon Earth newly cast up by a Mole, bringeth down the *Menses* in Women. That if a Child dyeth, and the Neck becometh not stiff, but for many hours remaineth lithe and flaccid, some other in the same house will dye not long after. That if a Woman with child looketh upon a dead body, her Child will be of a pale complexion; our learned and critical Philosophers might illustrate, whose exacter performances our adventures do but solicite; mean while, I hope, they will plausibly receive our attempts, or candidly correct our misconjectures.

Disce, sed ira cadat naso, rugosaque sanna,
Dum veteres avias tibi de pulmone revello.

THE SIXTH BOOK.

Of ſundry common Opinions Coſmographical and Hiſtorical.

The firſt Diſcourſe comprehended in ſeveral Chapters.

CHAP. I.

Concerning the beginning of the World, that the time thereof is not preciſely to be known, as Men generally ſuppoſe: Of mens enquiries in what ſeaſon or point of the Zodiack it began. That as they are generally made, they are in vain; and as particularly applied, uncertain. Of the diviſion of the ſeaſons and four quarters of the Year, according to Aſtronomers and Phyſicians. That the common compute of the Ancients, and which is yet retained by moſt, is unreaſonable and erroneous. Of ſome Divinations and ridiculous deductions from one part of the Year to another. And of the Providence and Wiſdom of God in the ſite and motion of the Sun.

CONcerning the World and its temporal circumſcriptions, who ever ſhall ſtrictly examine both extreams, will eaſily perceive, there is not only obſcurity in its end, but its beginning; that as its period is inſcrutable, ſo is its nativity indeterminable: That as it is preſumption to enquire after the one, ſo is there no reſt or ſatisfactory deciſion in the other. And hereunto we ſhall more readily aſſent, if we examine the information, and take a view of the ſeveral difficulties in this point; which we ſhall more eaſily do, if we conſider the different conceits of men, and duly perpend the imperfections of their diſcoveries.

The age of the World not certainly determinable.

And first, The Histories of the *Gentiles* afford us slender satisfaction, nor can they relate any story, or affix a probable point to its beginning. For some thereof (and those of the wisest amongst them) are so far from determining its beginning, that they opinion and maintain it never had any at all; as the doctrin of *Epicurus* implieth, and more positively *Aristotle* in his books *De Cœlo* declareth. Endeavouring to confirm it with arguments of Reason, and those appearingly demonstrative; wherein his labours are rational, and uncontrolable upon the grounds assumed, that is, of Physical generation, and a Primary or first matter, beyond which no other hand was apprehended. But herein we remain sufficiently satisfied from *Moses*, and the Doctrin delivered of the Creation; that is, a production of all things out of nothing, a formation not only of matter, but of form, and a materiation even of Matter it self.

Why the *Athenians* did wear a golden Insect upon their Head.

Others are so far from defining the Original of the World or of Mankind, that they have held opinions not only repugnant unto Chronology, but Philosophy; that is, that they had their beginning in the soil where they inhabited; assuming or receiving appellations conformable unto such conceits. So did the *Athenians* term themselves αὐτόχθονες or *Aborigines*, and in testimony thereof did wear a golden Insect on their Heads: the same name is also given unto the Inlanders, or *Midland* inhabitants of this Island by *Cæsar*. But this is a conceit answerable unto the generation of the Giants; not admittable in Philosophy, much less in Divinity, which distinctly informeth we are all the seed of *Adam*, that the whole World perished unto eight persons before the flood, and was after peopled by the *Colonies* of the sons of *Noah*. There was therefore never any *Autochthon*, or Man arising from the Earth, but *Adam*; for the Woman being formed out of the rib, was once removed from Earth, and framed from that Element under incarnation. And so although her production were not by copulation, yet was it in a manner seminal: For if in every part from whence the seed doth flow, there be contained the Idea of the whole; there was a seminality and contracted *Adam* in the rib, which by the information of a soul, was individuated into *Eve*. And therefore this conceit applied unto the Original of Man, and the beginning of the world, is more justly appropriable unto its end. For then indeed Men shall rise out of the Earth: the graves shall shoot up their concealed seeds, and in that great Autumn, Men shall spring up, and awake from their Chaos again.

Others have been so blind in deducing the Original of things, or delivering their own beginnings, that when it hath fallen into controversie, they have not recurred unto Chronologie or the Records of time: but betaken themselves unto probabilities, and the conjecturalities of Philosophy. Thus when the two ancient Nations, *Egyptians*, and *Scythians*, contended for antiquity, the *Egyptians* pleaded their antiquity from the fertility of their soil, inferring that Men there first inhabited, where they were with most facility sustained; and such a land did they conceive was *Egypt*.

Diodor. Justin.

The *Scythians*, although a cold and heavier Nation, urged more acutely, deducing their arguments from the two active Elements and Principles of all things, Fire and Water. For if of all things there was first an union, and that Fire over-ruled the rest: surely that part of Earth which was coldest, would first get free, and afford a place of habitation. But if all the Earth were first involved in Water, those parts would surely first appear, which were most high, and of most elevated situation, and such was theirs. These reasons carried indeed the antiquity from the *Egyptians*, but confirmed it not in the *Scythians*: for as *Herodotus* relateth, from *Pargitaus*, their first King, unto *Darius* they accounted but two thousand years.

That Men speak not by natural instinct, but by instruction and imitation.

As for the *Egyptians*, they invented another way of trial; for as the same Author relateth, *Psammitichus* their King attempted this decision by a new and unknown experiment, bringing up two Infants with Goats, and where they never heard the voice of Man; concluding that to be the ancientest Nation, whose language they should first deliver. But herein he forgot, that speech was by instruction not instinct, by imitation, not by Nature,

that

that Men do ſpeak in ſome kind but like Parrots, and as they are inſtructed, that is, in ſimple terms and words, expreſſing the open notions of things; which the ſecond act of Reaſon compoundeth into propoſitions, and the laſt into Syllogiſms and Forms of ratiocination. And howſoever the account of *Manethon* the *Egyptian* Prieſt run very high, and it be evident that *Mizraim* peopled that Country (whoſe name with the *Hebrews* it beareth unto this day) and there be many things of great antiquity related in Holy Scripture, yet was their exact account not very ancient; for *Ptolomy* their Country-man beginneth his Aſtronomical compute no higher than *Nabonaſſer*, who is conceived by ſome the ſame with *Salmanaſſer*. As for the argument deduced from the Fertility of the Soil, duly enquired; it rather overthroweth than promoteth their antiquity; if that Country whoſe Fertility they ſo advance, was in ancient times no firm or open land, but ſome vaſt lake or part of the Sea, and became a gained ground by the mud and limous matter brought down by the River *Nilus*, which ſetled by degrees into a firm land. According as is expreſſed by *Strabo*, and more at large by *Herodotus*, both from the *Egyptian* tradition and probable inducements from reaſon, called therefore *fluvii donum*, an acceſſion of Earth, or tract of Land acquired by the River.

Laſtly, Some indeed there are, who have kept Records of time, and a conſiderable duration, yet do the exacteſt thereof afford no ſatisfaction concerning the beginning of the World, or any way point out the time of its creation. The moſt authentick Records and beſt approved antiquity are thoſe of the *Chaldeans*; yet in the time of *Alexander* the Great, they attained not ſo high as the flood. For as *Simplicius* relateth, *Ariſtotle* required of *Caliſthenes*, who accompanied that Worthy in his Expedition, that at his arrive at *Babylon*, he would enquire of the antiquity of their Records; and thoſe upon compute he found to amount unto 1903, years, which account notwithſtanding ariſeth no higher than 95 years after the flood. The *Arcadians*, I confeſs, were eſteemed of great antiquity, and it was uſually ſaid they were before the Moon, according unto that of *Seneca*, *Sydus poſt veteres Arcades editum*; and that of *Ovid*, *Lunâ gens prior illa fuit*. But this as *Cenſorinus* obſerveth, muſt not be taken groſly, as though they were exiſtent before that Luminary; but were ſo eſteemed, becauſe they obſerved a ſet courſe of year, before the *Greeks* conformed their year unto the courſe and motion of the Moon.

Thus the Heathens affording no ſatisfaction herein, they are moſt likely to manifeſt this truth, who have been acquainted with Holy Scripture, and the ſacred Chronology delivered by *Moſes* who diſtinctly ſets down this account, computing by certain intervals, by memorable *Æras*, *Epoche's* or terms of time. As from the Creation unto the flood, from thence unto *Abraham*, from *Abraham* unto the departure from *Egypt*, *&c.* Now in this number have only been *Samaritans*, *Jews* and *Chriſtians*. For the *Jews*, they agree not in their accounts, as *Bodine* in his method of Hiſtory hath obſerved out of *Baal Seder*, *Rabbi Naſſom*, *Gerſom*, and others; in whoſe compute the age of the World is not yet 5400 years. The ſame is more evidently obſervable from two moſt learned *Jews*, *Philo* and *Joſephus*; who very much differ in the accounts of time, and variouſly ſum up theſe Intervals aſſented unto by all. Thus *Philo* from the departure out of *Egypt* unto the building of the Temple, accounts but 920 years, but *Joſephus* ſets down 1062. *Philo* from the building of the Temple, to its deſtruction 440. *Joſephus* 470: *Philo* from the Creation to the Deſtruction of the Temple 3373. but *Joſephus* 3513. *Philo* from the Deluge to the Deſtruction of the Temple 1718. but *Joſephus* 1913. In which computes there are manifeſt diſparities, and ſuch as much divide the concordance and harmony of times.

Different accounts upon Scripture, concerning the Age of the World.

For the *Samaritans*; their account is different from theſe or any others; for they account from the Creation to the Deluge, but 1302 years; which cometh to paſs upon the different account of the ages of the Patriarchs ſet down when they begat Children. For whereas the *Hebrew*, *Greek* and *Latin* texts account *Jared* 162 when he begat *Enoch*, they account but 62. and

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ſo in others. Now the *Samaritans* were no incompetent Judges of times and the Chronology thereof; for they embraced the five books of *Moſes*, and as it ſeemeth, preſerved the Text with far more integrity than the *Jews*; who as *Tertullian*, *Chryſoſtom*, and others obſerve, did ſeveral wayes corrupt the ſame, eſpecially in paſſages concerning the prophecies of Chriſt; So that as *Jerom* profeſſeth, in his tranſlation he was fain ſometime to relieve himſelf by the *Samaritan* Pentateuch; as amongſt others in that Text, *Deuteronomy* 27. *Maledictus omnis qui non permanſerit in omnibus quæ ſcripta ſunt in libro Legis.* From hence Saint *Paul* inferreth there is no juſtification by the Law, and urgeth the Text according to the Septuagint. Now the Jews to afford a latitude unto themſelves, in their copies expunged the word כל or Syncategorematical term *omnis*: wherein lieth the ſtrength of the Law, and of the Apoſtles argument; but the *Samaritan* Bible retained it right, and anſwerable unto what the Apoſtle had urged.

Gal. 3.

As for Chriſtians from whom we ſhould expect the exacteſt and moſt concurring account, there is alſo in them a manifeſt diſagreement, and ſuch as is not eaſily reconciled. For firſt, the Latins accord not in their account: to omit the calculation of the Ancients, of *Auſtin*, *Bede*, and others, the Chronology of the Moderns doth manifeſtly diſſent. *Joſephus Scaliger*, whom *Helvicus* ſeems to follow, accounts the Creation in 765 of the *Julian* period; and from thence unto the Nativity of our Saviour alloweth 3947 years; But *Dionyſius Petavius* a learned Chronologer diſſenteth from this compute almoſt 40 years; placing the Creation in the 730 of the *Julian* period, and from thence unto the Incarnation accounteth 3983 years.

For the Greeks; their accounts are more anomalous: for if we recur unto ancient computes, we ſhall find that *Clemens Alexandrinus*, an ancient Father and *Præceptor* unto *Origen*, accounted from the Creation unto our Saviour, 5664 years; for in the firſt of his Stromaticks, he collecteth the time from *Adam* unto the death of *Commodus* to be 5858 years; now the death of *Commodus* he placeth in the year after Chriſt 194, which number deducted from the former, there remaineth 5664. *Theophilus* Biſhop of *Antioch* accounteth unto the Nativity of Chriſt 5515, deduceable from the like way of compute, for in his firſt Book *ad Autolychum* he accounteth from *Adam* unto *Aurelius Verus* 5695 years; now that Emperour died in the year of our Lord 180, which deducted from the former ſumm, there remaineth 5515. *Julius Africanus* an ancient Chronologer, accounteth ſomewhat leſs, that is, 5500. *Euſebius*, *Oroſius*, and others diſſent not much from this, but all exceed five thouſand.

The latter compute of the Greeks, as *Petavius* obſerveth, hath been reduced unto two or three accounts. The firſt accounts unto our Saviour 5501, and this hath been obſerved by *Nicephorus*, *Theophanes*, and *Maximus*. The other accounts 5509; and this of all at preſent is generally received by the Church of *Conſtantinople*, obſerved alſo by the Moſcovite, as I have ſeen in the date of the Emperors Letters; wherein this year of ours 1645 is from the year of the world 7154, which doth exactly agree unto this laſt account 5509: for if unto that ſumm be added 1645, the product will be 7154, by this Chronology are many Greek Authors to be underſtood: and thus is *Martinus Cruſius* to be made out, when in his Turcogrecian hiſtory he delivers, the City of *Conſtantinople* was taken by the Turks in the year ׳ָשְׁנָה that is, 6961. Now according unto theſe Chronologiſts, the Prophecy of *Elias* the Rabbin, ſo much in requeſt with the Jews, and in ſome credit alſo with Chriſtians, that the world ſhould laſt but ſix thouſand years; unto theſe I ſay, it hath been long and out of memory diſproved; for the Sabbatical and 7000 year wherein the World ſhould end (as did the Creation on the ſeventh day) unto them is long ago expired; they are proceeding in the eight thouſand year, and numbers exceeding thoſe days which Men have made the types and ſhadows of theſe. But certainly what *Marcus Leo* the Jew conceiveth of the end of the Heavens, exceedeth the account of all that ever ſhall be; for though he conceiveth the Elemental frame ſhall end in the Seventh or Sabbatical Millenary, yet cannot he opi-

By what account the World hath laſted 7154 years.

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nion the Heavens and more durable part of the Creation ſhall periſh before ſeven times ſeven or 49, that is, the Quadrant of the other ſeven, and perfect Jubilee of thouſands.

Thus may we obſerve the difference and wide diſſent of mens opinions, and thereby the great incertainty in this eſtabliſhment. The Hebrews not only diſſenting from the Samaritans, the Latins from the Greeks, but every one from another. Inſomuch that all can be in the right, it is impoſſible; that any one is ſo, not with aſſurance determinable. And therefore as *Petavius* confeſſeth, to effect the ſame exactly without inſpiration, it is impoſſible, and beyond the Arithmetick of any but God himſelf. And therefore alſo what ſatisfaction may be obtained from thoſe violent diſputes, and eager enquirers in what day of the month the world began either of *March* or *October*; likewiſe in what face or poſition of the Moon, whether at the prime or full, or ſoon after, let our ſecond and ſerious conſiderations determine.

The cauſe of ſo different accounts about the age of the World.

Now the reaſon and ground of this diſſent, is the unhappy difference between the Greek and Hebrew Editions of the Bible, for unto theſe two Languages have all Tranſlations conformed; the Holy Scripture being firſt delivered in Hebrew, and firſt tranſlated into Greek. For the Hebrew; it ſeems the primitive and ſureſt text to rely on, and to preſerve the ſame entire and uncorrupt there hath been uſed the higheſt caution humanity could invent. For as *R. Ben Maimon* hath declared, if in the copying thereof, one letter were written twice, or if one letter but touched another, that copy was not admitted into their Synagogues, but only allowable to be read in Schools and private families. Neither were they careful only in the exact number of their Sections of the Law, but had alſo the curioſity to number every word, and affixed the account unto their ſeveral books. Notwithſtanding all which, divers corruptions enſued, and ſeveral depravations ſlipt in, ariſing from many and manifeſt grounds, as hath been exactly noted by *Morinus* in his preface unto the Septuagint.

Corruption even in the Hebrew Text of the Bible.

As for the Septuagint, it is the firſt and moſt ancient Tranſlation; and of greater antiquity than the Chaldee verſion; occaſioned by the requeſt of *Ptolomeus Philadelphus* King of *Egypt*, for the ornament of his memorable Library; unto whom the high Prieſt addreſſed ſix Jews out of every Tribe, which amounteth unto 72; and by theſe was effected that Tranſlation we uſually term the Septuagint, or Tranſlation of ſeventy. Which name, however it obtain from the number of their perſons, yet in reſpect of one common Spirit, it was the Tranſlation but as it were of one Man; if as the ſtory relateth, although they were ſet apart and ſevered from each other, yet were their Tranſlations found to agree in every point, according as is related by *Philo* and *Joſephus*; although we find not the ſame in *Ariſtæas*, who hath expreſly treated thereof. But of the Greek compute there have paſſed ſome learned diſſertations not many years ago, wherein the learned *Iſaacus Voſſius* makes the nativity of the world to anticipate the common account one thouſand four hundred and forty years.

The Credit of the Septuagint tranſlation.

Ariſtæas ad Philocratorem de 72 interpretibus.

This Tranſlation in ancient times was of great authority, by this many of the Heathens received ſome notions of the Creation and the mighty works of God; This in expreſs terms is often followed by the Evangeliſts, by the Apoſtles, and by our Saviour himſelf in the quotations of the Old Teſtament. This for many years was uſed by the Jews themſelves, that is, ſuch as did Hellenize and diſperſedly dwelt out of *Paleſtine* with the Greeks; and this alſo the ſucceeding Chriſtians and ancient Fathers obſerved; although there ſucceeded other Greek verſions, that is, of *Aquila*, *Theodoſius* and *Symmachus*; for the Latin tranſlation of *Jerom* called now the Vulgar, was about 800 years after the Septuagint: although there was alſo a Latin tranſlation before, called the Italick verſion. Which was after loſt upon the general reception of the tranſlation of Saint *Jerom*. Which notwithſtanding (as he himſelf acknowledgeth) had been needleſs, if the Septuagint copies had remained pure, and as they were firſt tranſlated. But, (beſide that different copies were uſed, that *Alexandria* and *Egypt* followed

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De Hebræi & Græci textus ſincritate.

the copy of *Heſychius*, *Antioch* and *Conſtantinople* that of *Lucian* the Martyr, and others that of *Origen*) the Septuagint was much depraved, not only from the errors of Scribes, and the emergent corruptions of time, but malicious contrivance of the Jews; as *Juſtin Martyr* hath declared, in his learned dialogue with *Tryphon*, and *Morinus* hath learnedly ſhewn from many confirmations.

Whatſoever Interpretations there have been ſince, have been eſpecially effected with reference unto theſe, that is, the Greek and Hebrew text, the Tranſlators ſometimes following the one, ſometimes adhering unto the other, according as they found them conſonant unto truth, or moſt correſpondent unto the rules of faith. Now however it cometh to paſs, theſe two are very different in the enumeration of Genealogies, and particular accounts of time; for in the ſecond interval, that is, between the Flood and *Abraham*, there is by the Septuagint introduced one *Cainan* to be the Son of *Arphaxad* and Father of *Salah*; whereas in the Hebrew there is no mention of ſuch a perſon, but *Arphaxad* is ſet down to be the Father of *Salah*. But in the firſt interval, that is, from the Creation unto the Flood, their diſagreement is more conſiderable; for therein the Greek exceedeth the Hebrew, and common account almoſt 600 years. And 'tis indeed a thing not very ſtrange, to be at the difference of a third part, in ſo large and collective an account, if we conſider how differently they are ſet forth in minor and leſs miſtakable numbers. So in the Prophecie of *Jonah*, both in the Hebrew and Latin text, it is ſaid, Yet forty dayes and *Nineveh* ſhall be overthrown: But the Septuagint ſaith plainly, and that in letters at length, τρεῖς ἡμέρας, that is, yet three dayes and *Nineveh* ſhall be deſtroyed. Which is a difference not newly crept in, but an obſervation very ancient, diſcuſſed by *Auſtin* and *Theodoret*, and was conceived an error committed by the Scribe. Men therefore have raiſed different computes of time, according as they have followed their different texts; and ſo have left the hiſtory of times far more perplexed than Chronology hath reduced.

Again, However the texts were plain, and might in their numerations agree, yet were there no ſmall difficulty to ſet down a determinable Chronology, or eſtabliſh from hence any fixed point of time. For the doubts concerning the time of the Judges are inexplicable; that of the Reigns and ſucceſſion of Kings is as perplexed; it being uncertain whether the years both of their lives and reigns ought to be taken as compleat, or in their beginning and but currant accounts. Nor is it unreaſonable to make ſome doubt whether in the firſt ages and long lives of our Fathers, *Moſes* doth not ſometime account by full and round numbers, whereas ſtrictly taken they might be ſome few years above or under; as in the age of *Noah*, it is delivered to be juſt five hundred when he begat *Sem*; whereas perhaps he might be ſomewhat above or below that round and compleat number. For the ſame way of ſpeech is uſual in divers other expreſſions: Thus do we ſay The Septuagint, and uſing the full and articulate number, do write the Tranſlation of Seventy; whereas we have ſhewn before, the preciſe number was Seventy two. So is it ſaid that Chriſt was three dayes in the grave; according to that of *Matthew*, As *Jonas* was three days and three nights in the Whales belly, ſo ſhall the Son of Man be three days and three nights in the heart of the Earth: which notwithſtanding muſt be taken Synecdochically; or by underſtanding a part for a whole day; for he remained but two nights in the grave: for he was buried in the afternoon of the firſt day; and aroſe very early in the morning on the third; that is, he was interred in the eve of the Sabbath, and aroſe the morning after it.

Moreover although the number of years be determined and rightly underſtood, and there be without doubt a certain truth herein; yet the text ſpeaking obſcurely or dubiouſly, there is oft-times no ſlender difficulty at what point to begin or terminate the account. So when it is ſaid *Exod.* 12. the ſojourning of the Children of *Iſrael* who dwelt in *Egypt* was 430 years, it cannot be taken ſtrictly, and from their firſt arrival into *Egypt*, for their habitation in that land was far leſs; but the account muſt begin from the Covenant

Covenant of God with *Abraham*, and must also comprehend their sojourn in the land of *Canaan*, according as is expressed *Gal.* 3. *The Covenant that was confirmed before of God in Christ, the Law which was 430 years after cannot disannul.* Thus hath it also happened in the account of the 70 years of their captivity, according to that of *Jeremy*, *This whole land shall be a desolation, and these Nations shall serve the King of Babylon 70 years.* Now where to begin or end this compute, ariseth no small difficultie; for there were three remarkable Captivities, and deportations of the Jews. The first was in the third or fourth year of *Joachim*, and first of *Nabuchodonozor*, when *Daniel* was carried away; the second in the reign of *Jeconiah*, and the eighth year of the same King; the third and most deplorable in the reign of *Zedechias*, and in the nineteenth year of *Nabuchodonozor*, whereat both the Temple and City were burned. Now such is the different conceit of these times, that Men have computed from all; but the probablest account and most concordant unto the intention of *Jeremy* is from the first of *Nabuchodonozor* unto the first of King *Cyrus* over *Babylon*; although the Prophet *Zachary* accounteth from the last. *O Lord of hosts, How long! Wilt thou not have mercy on Jerusalem, against which thou hast had indignation these threescore and ten years?* for he maketh this expostulation in the second year of *Darius Hystaspes*, wherein he propheſied, which is about eighteen years in account after the other.

Chap. 20.

Chap. 1. 12.

Thus also although there be a certain truth therein, yet is there no easie doubt concerning the seventy weeks, or seventy times seven years of *Daniel*; whether they have reference unto the nativity, or passion of our Saviour, and especially from whence, or what point of time they are to be computed. For thus is it delivered by the Angel *Gabriel*: *Seventy weeks are determined upon thy people*; and again in the following verse: *Know therefore and understand, that from the going forth of the Commandment to restore and to build Jerusalem, unto the Messias the Prince, shall be seven weeks, and threescore and two weeks, the street shall be built again, and the wall even in troublesome times; and after threescore and two weeks shall Messiah be cut off.* Now the going out of the Commandment to build the City, being the point from whence to compute, there is no slender controversie when to begin. For there are no less than four several Edicts to this effect, the one in the first year of *Cyrus*, the other in the second of *Darius*, the third and fourth in the seventh, and in the twentieth of *Artaxerxes Longimanus*; although as *Petavius* accounteth, it best accordeth unto the twentieth year of *Artaxerxes*, from whence *Nehemiah* deriveth his Commission. Now that computes are made uncertainly with reference unto Christ, it is no wonder, since I perceive the time of his Nativity is in controversie, and no less his age at his Passion. For *Clemens* and *Tertullian* conceive he suffered at thirty; but *Irenaus*, a Father nearer his time, is further off in his account, that is, between forty and fifty.

The difficulties of *Daniels* 70 Weeks.

Of our Blessed Saviours age at his Passion.

Longomontanus a late Astronomer, endeavours to discover this secret from Astronomical grounds, that is, the *Apogeum* of the Sun; conceiving the Excentricity invariable, and the *Apogeum* yearly to move one scruple, two seconds, fifty thirds, *&c.* Wherefore if in the time of *Hipparchus*, that is, in the year of the *Julian* period 4557. it was in the fifth degree of *Gemini*, and in the days of *Tycho Brahe*, that is in the year of our Lord 1588, or of the world 5554. the same was removed unto the fifth degree of *Cancer*; by the proportion of its motion, it was at the Creation first in the beginning of *Aries*, and the *Perigeum* or nearest point in *Libra*. But this conceit how ingenious or subtile soever, is not of satisfaction; it being not determinable, or yet agreed in what time precisely the *Apogeum* absolveth one degree, as *Petavius* hath also delivered.

De Doctrina temporum l. 4.

Lastly, However these or other difficulties intervene, and that we cannot satisfie our selves in the exact compute of time, yet may we sit down with the common and usual account; nor are these differences derogatory unto the Advent or Passion of Christ, unto which indeed they all do seem to point, for the Prophecies concerning our Saviour were indefinitely delivered before that of *Daniel*; so was that pronounced unto *Eve* in Paradise, that after of *Balaam*, those of *Isaiah* and the Prophets, and that memora-

ble one of *Jacob*, *The Scepter ſhall not depart from Iſrael untill Shilo come*; which time notwithſtanding it did not define at all. In what year therefore ſoever, either from the deſtruction of the Temple, from the re-edifying thereof, from the flood, or from the Creation he appeared, certain it is, that in the fulneſs of time he came. When he therefore came, is not ſo conſiderable, as that he is come: in the one there is conſolation, in the other no ſatisfaction. The greater Quere is, when he will come again; and yet indeed it is no Quere at all: for that is never to be known, and therefore vainly enquired: 'tis a profeſſed and authentick obſcurity, unknown to all but to the omniſcience of the Almighty. Certainly the ends of things are wrapt up in the Hands of God, he that undertakes the knowledge thereof, forgets his own beginning, and diſclaims his principles of Earth. No Man knows the end of the World, nor aſſuredly of any thing in it: God ſees it, becauſe unto his Eternity it is preſent; he knoweth the ends of us, but not of himſelf: and becauſe he knows not this, he knoweth all things, and his knowledge is endleſs, even in the object of himſelf.

CHAP. II.

Of Mens Enquiries in what ſeaſon or Point of the Zodiack it began, that as they are generally made, they are in vain, and as particularly, uncertain.

The World began in all the four quarters of the Year.

CConcerning the Seaſons, that is, the quarters of the Year, ſome are ready to enquire, others to determine, in what ſeaſon, whether in the Autumn, Spring, Winter, or Summer the World had its beginning. Wherein we affirm that as the queſtion is generally and in reſpect of the whole Earth propoſed, it is with manifeſt injury unto Reaſon in any particular determined; becauſe when ever the World had its beginning it was created in all theſe four. For, as we have elſewhere delivered, whatſoever ſign the Sun poſſeſſeth (whoſe receſs or vicinity defineth the quarters of the year) thoſe four ſeaſons were actually exiſtent; it being the Nature of that Luminary to diſtinguiſh the ſeveral ſeaſons of the year; all which it maketh at one time in the whole Earth, and ſucceſſively in any part thereof. Thus if we ſuppoſe the Sun created in *Libra*, in which ſign unto ſome it maketh Autumn; at the ſame time it had been Winter unto the Northern-pole, for unto them at that time the Sun beginneth to be inviſible, and to ſhew it ſelf again unto the pole of the South. Unto the poſition of a right Sphere or directly under the *Æquator*, it had been Summer; for unto that ſituation the Sun is at that time vertical. Unto the latitude of *Capricorn*, or the Winter Solſtice it had been Spring; for unto that poſition it had been in a middle point, and that of aſcent, or approximation; but unto the latitude of *Cancer* or the Summer Solſtice it had been Autumn; for then had it been placed in a middle point, and that of deſcent, or elongation.

And if we ſhall take literally what *Moſes* deſcribed popularly, this was alſo the conſtitution of the firſt day. For when it was evening unto one longitude, it was morning unto another; when night unto one, day unto another. And therefore that queſtion, whether our Saviour ſhall come again in the twilight (as is conceived he aroſe) or whether he ſhall come upon us in the night, according to the compariſon of a Thief, or the *Jewiſh* tradition, that he will come about the time of their departure out of *Ægypt*, when they eat the Paſsover, and the Angel paſſed by the doors of their Houſes; this Quere I ſay needeth not further diſpute. For if the Earth be almoſt every where inhabited, and his coming (as Divinity affirmeth)

affirmeth) must needs be unto all; then must the time of his appearance be both in the day and night. For if unto *Jeruſalem*, or what part of the World ſoever he ſhall appear in the night, at the ſame time unto the *Antipodes*, it muſt be day; if twilight unto them, broad day unto the *Indians*: if noon unto them, yet night unto the *Americans*; and ſo with variety according unto various habitations, or different poſitions of the Sphere, as will be eaſily conceived by thoſe who underſtand the affections of different habitations, and the conditions of *Antœci*, *Paræci*, and *Antipodes*. And ſo although he appear in the night, yet may the day of Judgement or Dooms-day well retain that name; for that implieth one revolution of the Sun, which maketh the day and night, and that one natural day. And yet to ſpeak ſtrictly, if (as the Apoſtle affirmeth) we ſhall be changed in the twinkling of an eye, and (as the Schools determine) the deſtruction of the World ſhall not be ſucceſſive but in an inſtant; we cannot properly apply thereto the uſual diſtinctions of time; calling that twelve hours, which admits not the parts thereof, or uſe at all the name of time, when the nature thereof ſhall periſh. Νυχθήμερον.

But if the enquiry be made unto a particular place, and the queſtion determined unto ſome certain Meridian; as namely, unto *Meſopotamia* wherein the ſeat of Paradiſe is preſumed, the Query becomes more reaſonable, and is indeed in nature alſo determinable. Yet poſitively to define that ſeaſon, there is no ſlender difficulty; for ſome contend that it began in the Spring; as (beſide *Euſebius*, *Ambroſe*, *Bede*, and *Theodoret*) ſome few Years paſt, *Henrico Philippi* in his Chronology of the Scripture. Others are altogether for Autumn; and from hence do our Chronologers commence their compute; as may be obſerved in *Helvicus*, *Jo. Scaliger*, *Calviſius*, and *Petavius*.

CHAP. III.

Of the Diviſions of the Seaſons and four Quarters of the Year, according unto Aſtronomers and Phyſicians: that the common compute of the Ancients, and which is ſtill retained by ſome, is very queſtionable.

AS for the diviſions of the Year, and the quartering out this remarkable ſtandard of time, there have paſſed eſpecially two diſtinctions: the firſt in frequent uſe with Aſtronomers, according to the cardinal interſections of the Zodiack, that is, the two Æquinoctials and both the Solſtitial points, defining that time to be the Spring of the year, wherein the Sun doth paſs from the Æquinox of *Aries* unto the Solſtice of *Cancer*; the time between the Solſtice and the Æquinox of *Libra*, Summer; from thence unto the Solſtice of *Capricornus*, Autumn; and from thence unto the Æquinox of *Aries* again, Winter. Now this diviſion although it be regular and equal, is not univerſal; for it includeth not thoſe latitudes which have the Seaſons of the Year double; as have the Inhabitants under the Æquator, or elſe between the Tropicks. For unto them the Sun is vertical twice a year, making two diſtinct Summers in the different points of verticality. So unto thoſe which live under the *Æquator*, when the Sun is in the Æquinox, it is Summer, in which points it maketh Spring or Autumn unto us; and unto them it is alſo Winter when the Sun is in either Tropick; whereas unto us it maketh always Summer in the one. And the like will happen unto thoſe habitations, which are between the Tropicks and the *Æquator*.

Between the Tropicks two Summers in a Year.

A second and more sensible division there is observed by *Hippocrates*, and most of the ancient *Greeks*; according to the rising and setting of divers Stars; dividing the Year, and establishing the account of seasons from usual alterations, and sensible mutations in the Air, discovered upon the rising and settting of those Stars, accounting the Spring from the Æquinoxial point of *Aries*; from the rising of the *Pleiades*, or the several Stars on the back of *Taurus*, Summer; from the rising of *Arcturus*, a star between the thighs of *Boëtes*, Autumn; and from the setting of the *Pleiades*, Winter. Of these divisions because they were unequal, they were fain to subdivide the two larger portions, that is, of the Summer and Winter quarters; the first part of the Summer they named θέρος, the second unto the rising of the Dog-star, ὥρα, from thence unto the setting of *Arcturus* ὀπώρα. The Winter they divided also into three parts; the first part, or that of seed-time, they named ἀπόρετον, the middle or proper Winter, χειμὼν, the last, which was their planting or grafting time, φυταλιάν. This way of division was in former ages received, is very often mentioned in Poets, translated from one Nation to another; from the *Greeks* unto the *Latines*, as is received by good Authors; and delivered by Physicians, even unto our times.

Now of these two, although the first in some latitude may be retained, yet is not the other in any to be admitted. For in regard of time (as we elsewhere declare) the Stars do vary their longitudes, and consequently the times of their ascension and descension. That Star which is the term of numeration, or point from whence we commence the account, altering his site and longitude in process of time, and removing from West to East, almost one degree in the space of 72 years, so that the same Star, since the age of *Hippocrates* who used this account, is removed in *consequentia* about 27 degrees. Which difference of their longitudes, doth much diversifie the times of their ascents, and rendereth the account unstable which shall proceed thereby.

Again, In regard of different latitudes, this cannot be a setled rule, or reasonably applied unto many Nations. For whereas the setting of the *Pleiades* or seven Stars, is designed the term of Autumn, and the beginning of Winter; unto some latitudes these Stars do never set, as unto all beyond 67 degrees. And if in several and far distant latitudes we observe the same Star as a common term of account unto both, we shall fall upon an unexpected, but an unsufferable absurdity; and by the same account it will be Summer unto us in the North, before it be so unto those, which unto us are Southward, and many degrees approaching nearer the Sun. For if we consult the Doctrine of the Sphere, and observe the ascension of the *Pleiades*, which maketh the beginning of Summer, we shall discover that in the latitude of 40, these Stars arise in the 16 degree of *Taurus*; but in the latitude of 50, they ascend in the eleventh degree of the same sign, that is, days sooner; so shall it be Summer unto *London*, before it be unto *Toledo*, and begin to scorch in *England*, before it grow hot in *Spain*.

This is therefore no general way of compute, nor reasonable to be derived from one Nation unto another; the defect of which consideration hath caused divers errors in Latine Poets, translating these expressions from the *Greeks*; and many difficulties even in the *Greeks* themselves; which living in divers latitudes, yet observed the same compute. So that to make them out, we are fain to use distinctions; some time computing cosmically what they intended heliacally, and sometime in the same expression accounting the rising heliacally, the setting cosmically. Otherwise it will be hardly made out, what is delivered by approved Authors; and is an observation very considerable unto those which meet with such expressions, as they are very frequent in the Poets of elder times, especially *Hesiod*, *Aratus*, *Virgil*, *Ovid*, *Manilius*; and Authors Geoponical, or which have treated *de re rustica*, as *Constantine*, *Marcus Cato*, *Columella*, *Palladius* and *Varro*.

Lastly, The absurdity in making common unto many Nations those considerations whose verity is but particular unto some, will more evidently appear,

appear, if we examine the rules and Precepts of ſome one Climate, and fall upon conſideration with what incongruity they are tranſferrible unto others. Thus is it adviſed by *Heſiod*:

Pleiadibus Altante natis orientibus
Incipe Meſſem, Arationem verò occidentibus.

Implying hereby the Heliacal aſcent and Coſmical deſcent of thoſe ſtars. Now herein he ſetteth down a rule to begin Harveſt at the ariſe of the *Pleiades*; which in his time was in the beginning of *May*. This indeed was conſonant unto the clime wherein he lived, and their Harveſt began about that ſeaſon: but is not appliable unto our own, for therein we are ſo far from expecting an Harveſt, that our Barley-ſeed is not ended. Again, correſpondent unto the rule of *Heſiod*, *Virgil* affordeth another,

Ante tibi Eoæ Atlantides abſcondantur,
Debita quàm ſulcis committas ſemina.

Underſtanding hereby their Coſmical deſcent, or their ſetting when the Sun ariſeth, and not their Heliacal obſcuration, or their incluſion in the luſtre of the Sun, as *Servius* upon this place would have it; for at that time theſe Stars are many ſigns removed from that Luminary. Now herein he ſtrictly adviſeth, not to begin to ſow before the ſetting of theſe ſtars; which notwithſtanding without injury to Agriculture, cannot be obſerved in *England*; for they ſet unto us about the 12 of *November*, when our Seed-time is almoſt ended.

And this diverſity of clime and cœleſtial obſervations, preciſely obſerved unto certain Stars and Months, hath not only overthrown the deductions of one Nation to another, but hath perturbed the obſervation of feſtivities and ſtatary Solemnities, even with the *Jews* themſelves. For unto them it was commanded that at their entrance into the land of *Canaan*, in the fourteenth of the firſt month (that is *Abib* or *Niſan* which is Spring with us) they ſhould obſerve the celebration of the Paſſover; and on the morrow after, which is the fifteenth day, the feaſt of unleavened bread; and in the ſixteenth of the ſame Month, that they ſhould offer the firſt ſheaf of the Harveſt. Now all this was feaſible and of an eaſie poſſibility in the land of *Canaan*, or latitude of *Jeruſalem*; for ſo it is obſerved by ſeveral Authors in later times; and is alſo teſtified by Holy Scripture in times very far before. For when the Children of *Iſrael* paſſed the river *Jordan*, it is delivered by way of parentheſis, that the river overfloweth its banks in the time of Harveſt; which is conceived the time wherein they paſſed; and it is after delivered, that in the fourteenth day they celebrated the Paſſover: which according to the Law of *Moſes*, was to be obſerved in the firſt month, or month of *Abib*. *Joſh.* 3. *Joſh.* 5.

And therefore it is no wonder, what is related by *Luke*, that the Diſciples upon the *Deuteroproton*, as they paſſed by, plucked the ears of Corn. For the *Deuteroproton* or ſecond firſt Sabbath, was the firſt Sabbath after the *Deutera* or ſecond of the Paſſover, which was the ſixteenth of *Niſan* or *Abib*. And this is alſo evidenced from the received conſtruction of the firſt and latter rain. *I will give you the rain of your land in his due ſeaſon, the firſt rain and the latter rain.* For the firſt rain fell upon the ſeed-time about *October*, and was to make the ſeed to root, the latter was to fill the ear, and fell in *Abib* or *March*, the firſt month: according as is expreſſed. *And he will cauſe to come down for you the rain, the former rain and the latter rain in the firſt month*; that is the month of *Abib* wherein the Paſſover was obſerved. This was the Law of *Moſes*, and this in the land of *Canaan* was well obſerved, according to the firſt inſtitution; but ſince their diſperſion and habitation in Countries, whoſe conſtitutions admit not ſuch tempeſtivity of harveſts; and many not before the latter end of Summer; notwithſtanding the advantage of their Lunary account, and intercalary month *Veader*, affixed unto the beginning

What the *Sabbaton Deuteroproton*, *Luk.* 6. was. *Deut.* 11. *Joel* 2.

ginning of the Year, there will be found a great disparity in their observations, nor can they strictly and at the same season with their forefathers observe the commands of God.

To add yet further, those Geoponical rules and precepts of Agriculture which are delivered by divers Authors, are not to be generally received; but respectively understood unto climes whereto they are determined. For whereas one adviseth to sow this or that grain at one season, a second to set this or that at another, it must be conceived relatively, and every Nation must have its Country Farm; for herein we may observe a manifest and visible difference, not only in the seasons of Harvest, but in the grains themselves. For with us Barley-harvest is made after wheat-Harvest, but with the *Israelites* and *Ægyptians* it was otherwise; so is it expressed by way of priority, *Ruth* 2. *So Ruth kept fast by the maidens of Boaz to glean unto the end of Barley harvest and of Wheat-harvest*, which in the plague of hayl in *Ægypt* is more plainly delivered, *Exod.* 9. *And the Flax and the Barley were smitten, for the Barley was in the ear, and the Flax was bolled, but the Wheat and the Rye were not smitten, for they were not grown up.*

And thus we see the account established upon the arise or descent of the Stars, can be no reasonable rule unto distant Nations at all, and by reason of their retrogression, but temporary unto any one. Nor must these respective expressions be entertained in absolute considerations; for so distinct is the relation, and so artificial the habitude of this inferiour globe unto the superiour, and even of one thing in each unto the other: that general rules are dangerous; and applications most safe that run with security of circumstance. Which rightly to effect, is beyond the subtlety of Sense, and requires the artifice of Reason.

CHAP. IV.

Of some computation of days, and deductions of one part of the Year unto another.

That the days decrease and increase unequally.

FOurthly, There are certain vulgar opinions concerning days of the Year, and conclusions popularly deduced from certain days of the Month: Men commonly believing the days increase and decrease equally in the whole Year: which notwithstanding is very repugnant unto truth. For they increase in the month of *March*, almost as much as in the two months of *January* and *February*: and decrease as much in *September*, as they do in *July* and *August*. For the days increase or decrease according to the declination of the Sun, that is, its deviation Northward or Southward from the *Æquator*. Now this digression is not equal, but near the Æquinoxial intersections, it is right and greater, near the Solstices more oblique and lesser. So from the eleventh of *March* the vernal Æquinox, unto the eleventh of *April*, the Sun declineth to the North twelve degrees; from the eleventh of *April* unto the eleventh of *May* but eight, from thence unto the fifteenth of *June*, or the Summer Solstice but three and a half: all which make twenty two degrees and an half, the greatest declination of the Sun.

And this inequality in the declination of the Sun in the Zodiack or line of life, is correspondent unto the growth or declination of Man. For setting out from infancy, we increase not equally, or regularly attain to our state or perfection: nor when we descend from our state, is our declination equal, or carrieth us with even paces unto the Grave. For as *Hippocrates* affirmeth, a Man is hottest in the first day of his life, and coldest in the last: his natural heat setteth forth most vigorously at first, and declineth most sensibly at last. And so though the growth of Man

end

end not perhaps until twenty one, yet is his ſtature more advanced in the firſt ſeptenary than in the ſecond, and in the ſecond, more than in the third, and more indeed in the firſt ſeven years, than in the fourteen ſucceeding; for what ſtature we attain unto at ſeven years, we do ſometimes but double, moſt times come ſhort of at one and twenty. And ſo do we decline again: For in the latter age upon the Tropick and firſt deſcenſion from our Solſtice, we are ſcarce ſenſible of declination: but declining further, our decrement accelerates, we ſet apace, and in our laſt days precipitate into our Graves. And thus are alſo our progreſſions in the Womb, that is, our Formation, Motion, our Birth or Excluſion. For our Formation is quickly effected, our Motion appeareth later; and our Excluſion very long after: if that be true which *Hippocrates* and *Avicenna* have declared, that the time of our Motion is double unto that of Formation, and that of Excluſion treble unto that of Motion. As if the Infant be formed at thirty five days, it moveth at ſeventy, and is born the two hundred and tenth day, that is, the ſeventh Month; or if it receives not Formation before forty five days, it moveth the ninetieth day, and is excluded in the two hundred and ſeventieth, that is, the ninth Month.

The natural proportion of humane growth, *&c.* in the World;

and in the Womb.

There are alſo certain popular prognoſticks drawn from Feſtivals in the Calendar, and conceived opinions of certain days in Months; ſo is there a general tradition in moſt parts of *Europe*, that inferreth the coldneſs of ſucceeding Winter from the ſhining of the Sun upon *Candlemas* day, or the Purification of the Virgin *Mary*, according to the proverbial diſtich,

Si Sol ſplendeſcat Mariâ purificante,
Major erit glacies poſt feſtum quàm fuit ante.

So is it uſual among us to qualifie and conditionate the twelve Months of the Year, anſwerably unto the temper of the twelve days in *Chriſtmas*; and to aſcribe unto *March* certain borrowed days from *April*; all which Men ſeem to believe upon annual experience of their own, and the received traditions of their fore-fathers.

Now it is manifeſt, and moſt Men likewiſe know, that the Calendars of theſe computers, and the accounts of theſe days are very different; the Greeks diſſenting from the Latins, and the Latins from each other; the one obſerving the *Julian* or ancient account, as great *Britain* and part of *Germany*; the other adhering to the *Gregorian* or new account, as *Italy*, *France*, *Spain*, and the United Provinces of the Netherlands: Now this latter account by ten days at leaſt anticipateth the other; ſo that before the one beginneth the account, the other is paſt it; yet in the ſeveral calculations, the ſame events ſeem true, and Men with equal opinion of verity, expect and confeſs a confirmation from them all. Whereby is evident the Oraculous authority of tradition, and the eaſie ſeduction of Men, neither enquiring into the verity of the ſubſtance, nor reforming upon repugnance of circumſtance.

And thus may divers eaſily be miſtaken who ſuperſtitiouſly obſerve certain times, or ſet down unto themſelves an obſervation of unfortunate Months, or Days, or Hours; As did the *Egyptians*, two in every Month, and the *Romans*, the days after the Nones, Ides, and Calends. And thus the Rules of Navigators muſt often fail, ſetting down, as *Rhodiginus* obſerveth, ſuſpected and ominous days in every Month, as the firſt and ſeventh of *March*, the fifth and ſixth of *April*, the ſixth, the twelfth and fifteenth of *February* For the accounts hereof in theſe Months are very different in our days, and were different with ſeveral Nations in Ages paſt; and how ſtrictly ſoever the account be made, and even by the ſelf-ſame Calendar, yet is it poſſible that Navigators may be out. For ſo were the Hollanders, who paſſing Weſtard through *fretum le Mayre*, and compaſſing the Globe, upon their return into their own Country, found that they had loſt a day. For if two Men at the ſame time travel from the ſame place, the one Eaſtward, the other Weſtward round

about

about the Earth, and meet in the ſame place from whence the firſt ſet forth; it will ſo fall out, that he which hath moved Eaſtward againſt the diurnal motion of the Sun, by anticipating dayly ſomething of its circle with its own motion, will gain one day; but he that travelleth Weſtward, with the motion of the Sun, by ſeconding its revolution, ſhall loſe or come ſhort a day. And therefore alſo upon theſe grounds that *Delos* was ſeated in the middle of the Earth, it was no exact deciſion, becauſe two Eagles let fly Eaſt and Weſt by *Jupiter*, their meeting fell out juſt in the Iſland *Delos*.

CHAP. V.

A digreſſion of the wiſdom of God in the ſite and motion of the Sun.

HAving thus beheld the ignorance of Man in ſome things, his error and blindneſs in others, that is, in the meaſure of duration both of Years and Seaſons; let us awhile admire the Wiſdom of God in this diſtinguiſher of times, and viſible Deity (as ſome have termed it) the Sun. Which though ſome from its glory adore, and all for its benefits admire, we ſhall advance from other conſiderations, and ſuch as illuſtrate the artifice of its Maker. Nor do we think we can excuſe the duty of our knowledge, if we only beſtow the flouriſh of Poetry hereon, or thoſe commendatory conceits which popularly ſet forth the eminency of this creature; except we aſcend unto ſubtiler conſiderations, and ſuch as rightly underſtood, convincingly declare the wiſdom of the Creator. Which ſince a Spaniſh Phyſician hath begun, we will enlarge with our deductions; and this we ſhall endeavour from two conſiderations; its proper Situation, and wiſely ordered Motion.

Valerius de Philoſ. Sacr.

And firſt we cannot paſs over his Providence, in that it moveth at all; for had it ſtood ſtill, and were it fixed like the Earth, there had been then no diſtinction of times, either of day or Year, of Spring, of Autumn, of Summer, or of Winter: for theſe Seaſons are defined by the motions of the Sun; when that approacheth neareſt our Zenith, or vertical Point, we call it Summer; when furtheſt off, Winter; when in the middle ſpaces, Spring or Autumn: whereas remaining in one place, theſe diſtinctions had ceaſed, and conſequently the generation of all things depending on their viciſſitudes; making in one hemiſphere a perpetual Summer, in the other a deplorable and comfortleſs Winter. And thus had it alſo been continual day unto ſome, and perpetual night unto others; for the day is defined by the abode of the Sun above the Horizon, and the night by its continuance below; ſo ſhould we have needed another Sun, one to illuſtrate our Hemiſphere, a ſecond to enlighten the other; which inconvenience will enſue in what ſite ſoever we place it, whether in the Poles, or the Æquator, or between them both; no ſpherical body of what bigneſs ſoever illuminating the whole Sphere of another, although it illuminate ſomething more than half of a leſſer, according unto the doctrin of the Opticks.

What the natural day is.

His wiſdom is again diſcernable, not only in that it moveth at all, and in its bare motion, but wonderful in contriving the line of its revolution; which is ſo prudently effected, that by a viciſſitude in one body and light it ſufficeth the whole Earth, affording thereby a poſſible or pleaſurable habitation in every part thereof; and that is the line Ecliptick; all which to effect by any other circle, it had been impoſſible. For firſt, if we imagine the Sun to make his courſe out of the Ecliptick, and upon a line without any obliquity, let it be conceived within that Circle, that is either on the Æquator, or elſe on either ſide: (For if

Every part of the Earth habitable.

we

we ſhould place it either in the Meridian or Colures, beſide the ſubverſion of its courſe from Eaſt to Weſt, there would enſue the like incommodities.) Now if we conceive the Sun to move between the obliquity of this Ecliptick in a line upon one ſide of the Æquator, then would the Sun be viſible but unto one pole, that is the ſame which was neareſt unto it. So that unto the one it would be perpetual day; unto the other perpetual night; the one would be oppreſſed with conſtant heat, the other with inſufferable cold; and ſo the defect of alternation would utterly impugn the generation of all things; which naturally require a viciſſitude of heat to their production, and no leſs to their increaſe and conſervation.

But if we conceive it to move in the Æquator, firſt unto a parallel Sphere, or ſuch as have the pole for their Zenith, it would have made neither perfect day nor night. For being in the Æquator it would interſect their Horizon, and be half above and half beneath it: or rather it would have made perpetual night to both; for though in regard of the rational Horizon, which biſecteth the Globe into equal parts, the Sun in the Æquator would interſect the Horizon: yet in reſpect of the ſenſible Horizon (which is defined by the eye) the Sun would be viſible unto neither. For if as ocular witneſſes report, and ſome alſo write, by reaſon of the convexity of the Earth, the eye of Man under the Æquator cannot diſcover both the poles; neither would the eye under the poles diſcover the Sun in the Æquator. Thus would their nothing fructifie either near or under them: The Sun being Horizontal to the Poles, and of no conſiderable altitude unto parts a reaſonable diſtance from them. Again, unto a right Sphere, or ſuch as dwell under the Æquator, although it made a difference in day and night, yet would it not make any diſtinction of Seaſons: for unto them it would be conſtant Summer, it being always vertical, and never deflecting from them: So had their been no fructification at all, and the Countries ſubjected would be as unhabitable, as indeed antiquity conceived them.

Laſtly, It moving thus upon the Æquator, unto what poſition ſoever, although it had made a day, yet could it have made no year: for it could not have had thoſe two motions now aſcribed unto it, that is, from Eaſt to Weſt, whereby it makes the day, and likewiſe from Weſt to Eaſt, whereby the year is computed. For according to received Aſtronomy, the poles of the Æquator are the ſame with thoſe of the *Primum Mobile*. Now it is impoſſible that on the ſame circle, having the ſame poles, both theſe Motions from oppoſite terms, ſhould be at the ſame time performed; all which is ſalved, if we allow an obliquity in his annual Motion, and conceive him to move upon the Poles of the Zodiack, diſtant from theſe of the World 23 degrees and an half. Thus may we diſcern the neceſſity of its obliquity, and how inconvenient its Motion had been upon a circle parallel to the Æquator, or upon the Æquator it ſelf.

Now with what Providence this obliquity is determined, we ſhall perceive upon the enſuing inconveniences from any deviation. For firſt, if its obliquity had been leſs (as inſtead of twenty three degrees, twelve or the half thereof) the viciſſitude of Seaſons appointed for the generation of all things, would ſurely have been too ſhort; for different Seaſons would have hudled upon each other; and unto ſome it had not been much better than if it had moved on the Æquator. But had the obliquity been greater than now it is, as double, or of 40 degrees; ſeveral parts of the Earth had not been able to endure the diſproportionable differences of Seaſons, occaſioned by the great receſs, and diſtance of the Sun. For unto ſome habitations the Summer would have been extream hot, and the Winter extream cold; likewiſe the Summer temperate unto ſome, but exceſſive and in extremity unto others, as unto thoſe who ſhould dwell under the Tropick of *Cancer*, as then would do ſome part of *Spain*, or ten degrees beyond, as *Germany*, and ſome part of *England*; who would have Summers as now the *Moors* of *Africa*. For the

Sun would ſometime be vertical unto them: but they would have Winters like thoſe beyond the Arctick Circle; for in that Seaſon the Sun would be removed above 80 degrees from them. Again, it would be temperate to ſome habitations in the Summer, but very extream in the Winter: temperate to thoſe in two or three degrees beyond the Arctick Circle, as now it is unto us; for they would be equidiſtant from that Tropick, even as we are from this at preſent. But the Winter would be extream, the Sun being removed above an hundred degrees, and ſo conſequently would not be viſible in their Horizon, no poſition of Sphere diſcovering any ſtar diſtant above 90 degrees, which is the diſtance of every Zenith from the Horizon. And thus if the obliquity of this Circle had been leſs, the viciſſitude of ſeaſons had been ſo ſmall as not to be diſtinguiſhed; if greater, ſo large and diſproportionable as not to be endured.

Now for its ſituation, although it held this Ecliptick line, yet had it been ſeated in any other Orb, inconveniences would enſue of condition like the former; for had it been placed in the loweſt Sphere of the Moon, the year would have conſiſted but of one Month; for in that ſpace of time it would have paſſed through every part of the Ecliptick: ſo would there have been no reaſonable diſtinction of Seaſons required for the generation and fructifying of all things; contrary Seaſons which deſtroy the effects of one another, ſo ſuddenly ſucceeding. Beſides, by this vicinity unto the Earth, its heat had been intolerable: for if (as many affirm) there is a different ſenſe of heat from the different points of its proper Orb, and that in the *Apogeum* or higheſt point (which happeneth in *Cancer*) it is not ſo hot under that Tropick, on this ſide the Æquator, as unto the other ſide in the *Perigeum* or loweſt part of the Eccentrick (which happeneth in *Capricornus*) ſurely being placed in an Orb far lower, its heat would be unſufferable, nor needed we a fable to ſet the World on Fire.

A competent diſtinction of Seaſons neceſſary, and why.

But had it been placed in the higheſt Orb, or that of the eighth Sphere, there had been none but *Plato's* year, and a far leſs diſtinction of Seaſons; for one year had then been many, and according unto the ſlow revolution of that Orb which abſolveth not his courſe in many thouſand years, no Man had lived to attain the account thereof. Theſe are the inconveniences enſuing upon its ſituation in the extream Orbs; and had it been placed in the middle Orbs of the Planets, there would have enſued abſurdities of a middle nature unto them.

Now whether we adhere unto the hypotheſis of *Copernicus*, affirming the Earth to move, and the Sun to ſtand ſtill; or whether we hold, as ſome of late have concluded, from the ſpots in the Sun, which appear and diſappear again; that beſides the revolution it maketh with its Orbs, it hath alſo a dinetical Motion, and rowls upon its own Poles: whether I ſay we affirm theſe or no, the illations before mentioned are not thereby infringed. We therefore conclude this contemplation, and are not afraid to believe, it may be literally ſaid of the wiſdom of God, what Men will have but figuratively ſpoken of the works of Chriſt; that if the wonders thereof were duly deſcribed, the whole World, that is, all within the laſt circumference, would not contain them. For as his Wiſdom is infinite, ſo cannot the due expreſſions thereof be finite, and if the World compriſe him not, neither can it comprehend the ſtory of him.

CHAP.

CHAP. VI.

Concerning the vulgar opinion, that the Earth was ſlenderly peopled before the Flood.

BEſide the ſlender conſideration Men of latter times do hold of the firſt ages, it is commonly opinioned, and at firſt thought generally imagined, that the Earth was thinly inhabited, at leaſt not remotely planted before the flood; whereof there being two opinions, which ſeem to be of ſome extremity, the one too largely extending, the other too narrowly contracting the populoſity of thoſe times; we ſhall not paſs over this point without ſome enquiry into it.

Now for the true enquiry thereof, the means are as obſcure as the matter, which being naturally to be explored by Hiſtory, Humane or Divine, receiveth thereby no ſmall addition of obſcurity. For as for Humane relations, they are ſo fabulous in *Deucalion's* flood, that they are of little credit about *Ogyges* and *Noahs*. For the Heathens (as *Varro* accounteth) make three diſtinctions of time: the firſt from the beginning of the World unto the general Deluge of *Ogyges*, they term *Adelon*, that is, a time not much unlike that which was before time, immaniſeſt and unknown; becauſe thereof there is almoſt nothing or very obſcurely delivered: for though divers Authors have made ſome mention of the Deluge, as *Manethon* the *Egyptian* Prieſt, *Xenophon* de æquivocis, *Fabius Pictor* de Aureo ſeculo, *Mar. Cato* de originibus, and *Archilochus* the Greek, who introduceth alſo the Teſtimony of *Moſes* in his fragment *de temporibus*: yet have they delivered no account of what preceded or went before. *Joſephus* I confeſs in his Diſcourſe againſt *Appion* induceth the antiquity of the *Jews* unto the flood, and before, from the teſtimony of Humane Writers; inſiſting eſpecially upon *Maſeus* of *Damaſcus*, *Jeronymus Ægyptius*, and *Beroſus*; and confirming the long duration of their lives, not only from theſe, but the authority of *Heſiod*, *Erathius*, *Hellanicus* and *Ageſilaus*. *Beroſus* the *Chaldean* Prieſt, writes moſt plainly, mentioning the City of *Enos*, the name of *Noah* and his Sons, the building of the Ark and alſo the place of its landing. And *Diodorus Siculus* hath in his third book a paſſage, which examined, advanceth as high as *Adam*: for the *Chaldeans*, ſaith he, derive the Original of their Aſtronomy and letters forty three thouſand years before the Monarchy of *Alexander* the Great: now the years whereby they computed the antiquity of their letters, being as *Xenophon* interprets to be accounted Lunary; the compute will ariſe unto the time of *Adam*. For forty three thouſand Lunary years make about three thouſand ſix hundred thirty four years, which anſwereth the Chronology of time from the beginning of the World unto the raign of *Alexander*, as *Annius* of *Viterbo* computeth in his Comment upon *Beroſus*.

The ſecond ſpace or interval of time is accounted from the flood unto the firſt Olympiad, that is, the year of the World 3174, which extendeth unto the days of *Iſaiah* the Prophet, and ſome twenty years before the foundation of *Rome*: this they term *Mythicon* or fabulous, becauſe the account thereof, eſpecially of the firſt part, is fabulouſly or imperfectly delivered. Hereof ſome things have been briefly related by the Authors above mentioned: more particularly by *Dares Phrygius*, *Dictys Cretenſis*, *Herodotus*, *Diodorus Siculus*, and *Trogus Pompeius*; the moſt famous *Greek* Poets lived alſo in this interval, as *Orpheus*, *Linus*, *Muſeus*, *Homer*, *Heſiod*; and herein are comprehended the grounds, and firſt inventions of Poetical fables, which were alſo taken up by hiſtorical Writers, perturbing the *Chaldean* and *Egyptian* Records with fabulous additions; and confounding their names and ſtories, with their own inventions.

The third time ſucceeding until their preſent ages, they term *Hiſtoricon*, that is, ſuch wherein matters have been more truly hiſtorified, and may therefore be believed. Of theſe times alſo have written *Herodotus*, *Thucydides*, *Xenophon*, *Diodorus*; and both of theſe and the other preceding ſuch as have delivered univerſal Hiſtories or Chronologies; as (to omit *Philo*, whoſe Narrations concern the *Hebrews*) *Euſebius*, *Julius Africanus*, *Oroſius*, *Ado* of *Vienna*, *Marianus Scotus*, *Hiſtoria tripartita*, *Urſpergenſis*, *Carion*, *Pineda*, *Salian*, and with us Sir *Walter Raleigh*.

Now from the firſt hereof that moſt concerneth us, we have little or no aſſiſtance; the fragments and broken Records hereof inforcing not at all our purpoſe. And although ſome things not uſually obſerved, may be from thence collected, yet do they not advantage our diſcourſe, nor any way make evident the point in Hand. For the ſecond, though it directly concerns us not, yet in regard of our laſt *medium* and ſome illuſtrations therein, we ſhall be conſtrained to make ſome uſe thereof. As for the laſt, it concerns us not at all; for treating of times far below us, it can no way advantage us. And though divers in this laſt Age have alſo written of the firſt, as all that have delivered the general accounts of time, yet are their Tractates little auxiliary unto ours, nor afford us any light to detenebrate and clear this Truth.

As for Holy Scripture and divine relation, there may alſo ſeem therein but ſlender information, there being only left a brief narration hereof by *Moſes*, and ſuch as affords no poſitive determination. For the Text delivereth but two genealogies, that is, of *Cain* and *Seth*; in the line of *Seth* there are only ten deſcents, in that of *Cain* but ſeven, and thoſe in a right line with mention of Father and Son; excepting that of *Lamech*, where is alſo mention of Wives, Sons, and a Daughter. Notwithſtanding if we ſeriouſly conſider what is delivered therein, and what is alſo deducible, it will be probably declared what is by us intended, that is, the populous and ample habitation of the Earth before the flood. Which we ſhall labour to induce not from Poſtulates and entreated Maxims, but undeniable Principles declared in Holy Scripture; that is, the length of mens lives before the flood, and the large extent of time from Creation thereunto.

We ſhall only firſt crave notice, that although in the relation of *Moſes* there be very few perſons mentioned, yet are there many more to be preſumed; nor when the Scripture in the line of *Seth* nominates but ten perſons, are they to be conceived all that were of this generation: The Scripture ſingly delivering the Holy line, wherein the World was to be preſerved, firſt in *Noah*, and afterward in our Saviour. For in this line it is manifeſt there were many more born than are named; for it is ſaid of them all, that *they begat Sons and Daughters*. And whereas it is very late before it is ſaid they begat thoſe perſons which are named in the Scripture, the ſooneſt at 65, it muſt not be underſtood that they had none before; but not any in whom it pleaſed God the Holy line ſhould be continued. And although the expreſſion that they begat Sons and Daughters, be not determined to be before or after the mention of theſe, yet muſt it be before in ſome; for before it is ſaid that *Adam* begat *Seth* at the 130 year, it is plainly affirmed that *Cain* knew his wife, and had a Son; which muſt be one of the Daughters of *Adam*, one of thoſe whereof it is after ſaid, he begat Sons and Daughters. And ſo for ought can be diſproved there might be more perſons upon Earth than are commonly ſuppoſed, when *Cain* ſlew *Abel*; nor the fact ſo hainouſly to be aggravated in the circumſtance of the fourth perſon living. And whereas it is ſaid upon the nativity of *Seth*, God hath appointed me another ſeed inſtead of *Abel*, it doth not imply he had no other all this while; but not any of that expectation, or appointed (as his name implies) to make a progreſſion in the Holy line; in whom the World was to be ſaved, and from whom he ſhould be born, that was myſtically ſlain in *Abel*.

Now our firſt ground to induce the numeroſity of people before the flood, is the long duration of their lives, beyond 7, 8, and 9 hundred years.

Which

Which how it conduceth unto populosity we shall make but little doubt, if we consider there are two main causes of numerosity in any kind or species, that is, a frequent and multiparous way of breeding, whereby they fill the world with others, though they exist not long themselves; or a long duration and subsistence, whereby they do not only replenish the world with a new annumeration of others, but also maintain the former account in themselves. From the first cause we may observe examples in creatures oviparous, as Birds and Fishes; in vermiparous, as Flies, Locusts and Gnats; in animals also viviparous, as Swine and Conies. Of the first there is a great example in the herd of Swine in *Galilee*, although an unclean beast, and forbidden unto the *Jews*. Of the other a remarkable one in *Athenæus*, in the Isle *Astipalea*, one of the *Cyclades*, now called *Stampalia*, wherein from two that were imported, the number so increased, that the Inhabitants were constrained to have recourse unto the Oracle of *Delphos*, for an invention how to destroy them.

Others there are which make good the paucity of their breed with the length and duration of their days, whereof there want not examples in animals uniparous: First, in bisulcous or cloven-hooft, as Camels, and Beeves, whereof there is above a million annually slain in *England*. It is also said of *Job*, that he had a thousand yoak of Oxen, and six thousand Camels; and of the Children of *Israel* passing into the land of *Canaan*, that they took from the *Midianites* threescore and ten thousand Beeves; and of the Army of *Semiramis*, that there were therein one hundred thousand Camels. For Solipeds or firm-hooft animals, as Horses, Asses, Mules, *&c.* they are also in mighty numbers: so is it delivered that *Job* had a thousand she-Asses: that the *Midianites* lost sixty one thousand Asses. For Horses, it is affirmed by *Diodorus*, that *Ninus* brought against the *Bactrians* two hundred eighty thousand Horses; after him *Semiramis* five hundred thousand Horses, and Chariots one hundred thousand. Even in creatures steril and such as do not generate, the length of life conduceth much unto the multiplicity of the species; for the number of Mules which live far longer than their Dams or Sires, in Countries where they are bred, is very remarkable, and far more common than Horses.

A Million of Beeves yearly killed in *England*.

For Animals multifidous, or such as are digitated or have several divisions in their feet; there are but two that are uniparous, that is, Men and Elephants; who though their productions be but single, are notwithstanding very numerous. The Elephant (as *Aristotle* affirmeth) carrieth the young two years, and conceiveth not again (as *Edvardus Lopez* affirmeth) in many after, yet doth their age requite this disadvantage; they living commonly one hundred, sometime two hundred years. Now although they be rare with us in *Europe*, and altogether unknown unto *America*, yet in the two other parts of the World they are in great abundance, as appears by the relation of *Garcias ab Horto*, Physician to the Viceroy at *Goa*; who relates that at one venation the King of *Siam* took four thousand; and is of opinion they are in other parts in greater number than herds of Beeves in *Europe*. And though this delivered from a *Spaniard* unacquainted with our Northern droves, may seem very far to exceed; yet must we conceive them very numerous, if we consider the number of teeth transported from one Country to another; they having only two great teeth, and those not falling or renewing.

As for Man, the disadvantage in his single issue is the same with these, and in the lateness of his generation somewhat greater than any; yet in the continual and not interrupted time thereof, and the extent of his days; he becomes at present, if not than any other species, at least more numerous than these before mentioned. Now being thus numerous at present, and in the measure of threescore, fourscore or an hundred years, if their days extended unto six, seven or eight hundred, their generations would be proportionably multiplied; their times of generation being not only multiplied, but their subsistence continued. For though the great Grand child went

on,

* The term for that person from whom consanguineal relations are accounted, as in the *Arbor civilis.*

on, the * *Petrucius* and first Original would subsist and make one of the World; though he outlived all the terms of consanguinity, and became a stranger unto his proper progeny. So by compute of Scripture *Adam* lived unto the ninth generation, unto the days of *Lamech* the Father of *Noah*, *Methuselah* unto the year of the flood; and *Noah* was contemporary unto all from *Enoch* unto *Abraham*. So that although some died, the Father beholding so many descents, the number of Survivers must still be very great; for if half the Men were now alive, which lived in the last Century, the Earth would scarce contain their number. Whereas in our abridged and septuagesimal Ages, it is very rare, and deserves a Distich to behold the fourth generation. *Xerxes* complaint still remaining; and what he lamented in his Army, being almost deplorable in the whole World; Men seldom arriving unto those years whereby *Methuselah* exceeded nine hundred, and what *Adam* came short of a thousand, was defined long ago to be the age of Man.

Mater ait natæ, dic natæ filia, &c.

Now although the length of days conduceth mainly unto the numerosity of mankind, and it be manifest from Scripture they lived very long, yet is not the period of their lives determinable, and some might be longer livers, than we account that any were. For (to omit that conceit of some, that *Adam* was the oldest Man, in as much as he is conceived to be created in the maturity of mankind, that is, at 60. (for in that age it is set down they begat Children) so that adding this number unto his 930, he was 21 years older than any of his posterity) that even *Methuselah* was the longest liver of all the Children of *Adam*, we need not grant; nor is it definitively set down by *Moses*. Indeed of those ten mentioned in Scripture, with their several ages, it must be true; but whether those seven of the line of *Cain* and their progeny, or any of the Sons or Daughters posterity after them out-lived those, is not expressed in Holy Scripture; and it will seem more probable, that of the line of *Cain*, some were longer lived than any of *Seth*; if we concede that seven generations of the one lived as long as nine of the other. As for what is commonly alledged that God would not permit the life of any unto a thousand, because (alluding unto that of *David*) no Man should live one day in the sight of the Lord; although it be urged by divers, yet is it methinks an inference somewhat Rabbinical; and not of power to perswade a serious examinator.

Having thus declared how powerfully the length of lives conduced unto the populosity of those times, it will yet be easier acknowledged if we descend to particularities, and consider how many in seven hundred years might descend from one Man; wherein considering the length of their dayes, we may conceive the greatest number to have been alive together. And this that no reasonable Spirit may contradict, we will declare with manifest disadvantage; for whereas the duration of the World unto the flood was above 1600 years, we will make our compute in less than half that time. Nor will we begin with the first Man, but allow the Earth to be provided of Women fit for marriage the second or third first Centuries; and will only take as granted, that they might beget Children at sixty, and at an hundred years have twenty, allowing for that number forty years. Nor will we herein single out *Methuselah*, or account from the longest livers, but make choice of the shortest of any we find recorded in the Text, excepting *Enoch*; who after he had lived as many years as there be days in the year, was translated at 365. And thus from one stock of seven hundred years, multiplying still by twenty, we shall find the product to be one thousand, three hundred forty seven millions, three hundred sixty eight thousand, four hundred and twenty.

Century	1	20.
	2	400.
	3	8000.
	4	160,000.
	5	3,200,000.
	6	46,000,000.
	7	1,280,000,000.
Product		1, 347,363,420.

Now if this account of the learned *Petavius* will be allowed, it will make an unexpected encrease, and a larger number than may be found in *Asia*, *Africa* and *Europe*; especially if in *Constantinople*, the greatest City thereof, there be no more than *Botero* accounteth, seven hundred thousand Souls. Which duly considered, we shall rather admire how the Earth contained its inhabitants, than doubt its inhabitation; and might conceive the deluge not simply penal, but in some way also necessary, as many have conceived of translations, if *Adam* had not sinned, and the race of man had remained upon Earth immortal.

Now whereas some to make good their longevity, have imagined that the years of their compute were Lunary; unto these we must reply: That if by a Lunary year they understand twelve revolutions of the Moon, that is 354 days, eleven fewer than in the Solary year; there will be no great difference; at least not sufficient to convince or extenuate the question. But if by a Lunary year they mean one revolution of the Moon, that is, a month; they first introduce a year never used by the Hebrews in their Civil accompts; and what is delivered before of the Chaldean years (as *Xenophon* gives a caution) was only received in the Chronology of their Arts. Secondly, they contradict the Scripture, which makes a plain enumeration of many months in the account of the Deluge; for so it is expressed in the Text. *In the tenth Month, in the first day of the Month were the tops of the Mountains seen*: Concordant whereunto is the relation of humane Authors, *Inundationes plures fuere, prima novimestris inundatio terrarum sub prisco Ogyge. Meminisse hoc loco par est post primum diluvium Ogygi temporibus notatum, cum novem & amplius mensibus diem continua nox inumbrasset, Delon ante omnes terras radiis solis illuminatum sortitumque ex eo nomen.* And lastly, they fall upon an absurdity, for they make *Enoch* to beget Children about six years of age. For whereas it is said he begat *Methuselah* at 65, if we shall account every Month a year, he was at that time some six years and an half, for so many months are contained in that space of time.

Xenophon de Æquivocis. Solinus.

Having thus declared how much the length of mens lives conduced unto the populosity of their kind, our second foundation must be the large extent of time, from the Creation unto the Deluge, that is (according unto received computes about 1655 years) almost as long a time as hath passed since the nativity of our Saviour: and this we cannot but conceive sufficient for a very large increase, if we do but affirm what reasonable enquirers will not deny: That the Earth might be as populous in that number of years before the flood, as we can manifest it was in the same number after. And whereas there may be conceived some disadvantage, in regard that at the Creation the original of mankind was in two persons, but after the flood their propagation issued at least from six; against this we might very well set the length of their lives before the flood, which were abbreviated after, and in half this space contracted into hundreds and threescores. Notwithstanding to equalize accounts, we will allow three hundred years, and so long a time as we can manifest from the Scripture, There were four Men at least that begat children, *Adam*, *Cain*, *Seth*, and *Enos*; So shall we fairly and favourably proceed, if we affirm the World to have been as populous in sixteen hundred and fifty years before the flood, as it was in thirteen hundred after.

Now

Now how populous and largely inhabited it was within this period of time, we ſhall declare from probabilities, and ſeveral teſtimonies of Scripture and humane Authors.

And firſt, To manifeſt the ſame near thoſe parts of the Earth where the Ark is preſumed to have reſted; we have the relation of Holy Scripture accounting the genealogy of *Japhet*, *Cham* and *Sem*, and in this laſt, four deſcents unto the diviſion of the Earth in the days of *Peleg*, which time although it were not upon common compute much above an hundred years, yet were Men at this time mightily increaſed. Nor can we well conceive it otherwiſe, if we conſider they began already to wander from their firſt habitation, and were able to attempt ſo mighty a work as the building of a City and a Tower, whoſe top ſhould reach unto the Heavens. Whereunto there was required no ſlender number of perſons; if we conſider the magnitude thereof, expreſſed by ſome, and conceived to be *Turris Beli* in *Herodotus*; and the multitudes of people recorded at the erecting of the like or inferiour ſtructures: for at the building of *Solomon*'s Temple there were threeſcore and ten thouſand that carried burdens, and fourſcore thouſand hewers in the mountains, beſide the chief of his officers three thouſand and three hundred; and at the erecting of the Pyramids in the reign of King *Cheops*, as *Herodotus* reports, there were *decem myriades*, that is, an hundred thouſand Men. And though it be ſaid of the *Egyptians*,

Juvenal. *Porrum & cepe nefas violare & frangere morſu;*

yet did the ſumms expended in Garlick and Onyons amount unto no leſs than one thouſand ſix hundred Talents.

The firſt Monarchy or Kingdom of *Babylon* is mentioned in Scripture under the foundation of *Nimrod*, which is alſo recorded in humane hiſtory; as beſide *Beroſus*, in *Diodorus* and *Juſtin*; for *Nimrod* of the Scriptures is *Belus* of the Gentiles, and *Aſſur* the ſame with *Ninus* his ſucceſſour. There is alſo mention of divers Cities, particularly of *Niniveh* and *Reſen* expreſſed emphatically in the Text to be a great City.

Who *Nimrod* and *Aſſur* were.

That other Countries round about were alſo peopled, appears by the Wars of the Monarchs of *Aſſyria* with the *Bactrians*, *Indians*, *Scythians*, *Ethiopians*, *Armenians*, *Hyrcanians*, *Parthians*, *Perſians*, *Suſians*; they vanquiſhing (as *Diodorus* relateth) *Egypt*, *Syria*, and all *Aſia* minor, even from *Boſphorus* unto *Tanais*. And it is ſaid, that *Semiramis* in her expedition againſt the *Indians* brought along with her the King of *Arabia*. About the ſame time of the *Aſſyrian* Monarchy, do Authors place that of the *Sycionians* in *Greece*, and ſoon after that of the *Argives*, and not very long after, that of the *Athenians* under *Cecrops*; and within our period aſſumed are hiſtorified many memorable actions of the Greeks, as the expedition of the *Argonautes*, with the moſt famous Wars of *Thebes* and *Troy*.

That *Canaan* alſo and *Egypt* were well peopled far within this period, beſides their plantation by *Canaan* and *Miſraim*, appeareth from the hiſtory of *Abraham*, who in leſs than 400 years after the Flood, journeyed from *Meſopotamia* unto *Canaan* and *Egypt*, both which he found well peopled and policied into Kingdoms: wherein alſo in 430 years, from threeſcore and ten perſons which came with *Jacob* into *Egypt*, he became a mighty Nation; for it is ſaid, at their departure, there journeyed from *Rhameſis* to *Succoth* about ſix hundred thouſand on foot, that were Men, beſides Children. Now how populous the Land from whence they came was, may be collected not only from their ability in commanding ſuch ſubjections and mighty powers under them, but from the ſeveral accounts of that Kingdom delivered by *Herodotus*. And how ſoon it was peopled, is evidenced from the pillar of their King *Oſyris*, with this inſcription in *Diodorus*; *Mihi pater eſt Saturnus deorum junior, ſum vero Oſyris rex qui totum peragravi orbem uſq; ad Indorum fines, ad eos quoq; ſum profectus qui ſeptentrioni ſubjacent uſq; ad Iſtri fontes, & alias partes uſq; ad Oceanum.* Now according unto the beſt determina-

terminations *Osyris* was *Misraim*, and *Saturnus Egyptius* the same with *Cham*; after whose name *Egypt* is not only called in Scripture the Land of *Ham*, but thus much is also testified by *Plutarch*; for in his Treatise *de Osyride*, he delivereth that *Egypt* was called *Chamia à Chamo Noe filio*, that is, from *Cham* the Son of *Noah*. And if according to the consent of ancient Fathers, *Adam* was buried in the same place where Christ was crucified, that is Mount *Calvary*, the first Man ranged far before the Flood, and laid his bones many miles from that place, where it's presumed he received them. And this migration was the greater, if as the text expresseth, he was cast out of the East-side of Paradise to till the ground; and as the Position of the Cherubins implieth, who were placed at the East end of the Garden to keep him from the tree of life.

Who *Osyris* and *Saturnus Egyptius* were.

That the remoter parts of the Earth were in this time inhabited, is also induceable from the like testimonies; for (omitting the numeration of *Josephus*, and the genealogies of the Sons of *Noah*) that *Italy* was inhabited, appeareth from the Records of *Livie* and *Dionysius Halicarnasseus*, the story of *Æneas*, *Evander* and *Janus*, whom *Annius* of *Viterbo*, and the Chorographers of *Italy* do make to be the same with *Noah*. That *Sicily* was also peopled, is made out from the frequent mention thereof in *Homer*, the Records of *Diodorus* and others; but especially from a remarkable passage touched by *Aretius* and *Ranzanus* Bishop of *Lucerium*, but fully explained by *Thomas Fazelli* in his accurate History of *Sicily*; that is, from an ancient inscription in a stone at *Panormo*, expressed by him in its proper Characters, and by a *Syrian* thus translated, *Non est alius Deus præter unum Deum, non est alius potens præter eundem Deum, neq; est alius victor præter eundem quem colimus Deum: Hujus turris præfectus est* Sapha *filius* Eliphat, *filii* Esau, *fratris* Jacob, *filii* Isaac, *filii* Abraham: *& turri quidem ipsi nomen est* Baych, *sed turri huic proximæ nomen est* Pharath. The antiquity of the inhabitation of *Spain* is also confirmable, not only from *Berosus* in the plantation of *Tubal*, and a City continuing yet in his name; but the story of *Gerion*, the travels of *Hercules* and his pillars: and especiallya passage in *Strabo*, which advanceth unto the time of *Ninus*, thus delivered in his fourth book, The *Spaniards* (saith he) affirm that they have had Laws and Letters above six thousand years. Now the *Spaniards* or *Iberians* observing (as *Xenophon* hath delivered) *Annum quadrimestrem*, four Months unto a year, this compute will make up 2000 solary years, which is about the space of time from *Strabo*, who lived in the days of *Augustus*, unto the reign of *Ninus*.

That *Mauritania* and the coast of *Africa* were peopled very soon, is the conjecture of many wise Men, and that by the *Phœnicians*, who left their Country upon the invasion of *Canaan* by the *Israelites*. For beside the conformity of the *Punick* or *Carthaginian* language with that of *Phœnicia*, there is a pregnant and very remarkable testimony hereof in *Procopius*, who in his second *de bello Vandalico*, recordeth, that in a Town of *Mauritania Tingitana*, there was to be seen upon two white Columns in the *Phœnician* language these ensuing words; *Nos Maurici sumus qui fugimus à facie Jehoschue filii Nunis prædatoris.* The fortunate Islands or *Canaries* were not unknown; for so doth *Strabo* interpret that speech in *Homer* of *Proteus* unto *Menelaus*,

Sed te qua terræ postremus terminus extat,
Elysium in Campum cœlestia numina ducunt.

The like might we affirm from credible Histories both of *France* and *Germany*, and perhaps also of our own Country. For omitting the fabulous and *Trojan* original delivered by *Jeofrey* of *Monmouth*, and the express text of Scripture; that the race of *Japhet* did people the Isles of the *Gentiles*; the *British* Original was so obscure in *Cæsars* time, that he affirmeth the Inland inhabitants were *Aborigines*, that is, such as reported that they had their beginning in the Island. That *Ireland* our neighbour Island was not long time without Inhabitants, may be made probable by sundry accounts;

although we abate the Tradition of *Bartholanus* the *Scythian*, who arrived there three hundred years after the flood, or the relation of *Giraldus*, that *Cesaria* the Daughter of *Noah* dwelt there before.

Bochart. Geog. Sacr. part. 2.

Now should we call in the learned account of *Bochartus*, deducing the ancient names of Countries from *Phœnician*'s, who by their plantations, discoveries, and Sea-negotiations, have left unto very many Countries, *Phœnician* denominations; the enquiry would be much shorter: and if *Spain* in the *Phœnician* Original be but the region of *Conies*, *Lusitania*, or *Portugal* the Countrey of Almonds, if *Britannica* were at first *Baratanaca*, or the land of Tin, and *Ibernia* or *Ireland*, were but *Ibernae*, or the farthest habitation; and these names imposed and dispersed by *Phœnician* Colonies, in their several navigations; the Antiquity of habitations might be more clearly advanced.

Thus though we have declared how largely the World was inhabited within the space of 1300 years, yet must it be conceived more populous than can be clearly evinced; for a greater part of the Earth hath ever been peopled, than hath been known or described by Geographers, as will appear by the discoveries of all Ages. For neither in *Herodotus* or *Thucydides* do we find any mention of *Rome*, nor in *Ptolomy* of many parts of *Europe*, *Asia* or *Africa*. And because many places we have declared of long plantation, of whose populosity notwithstanding or memorable actions we have no ancient story; if we may conjecture of these by what we find related of others, we shall not need many words, nor assume the half of 1300 years. And this we might illustrate from the mighty acts of the *Assyrians*, performed not long after the Flood; recorded by *Justine* and *Diodorus*; who makes relation of expeditions by Armies, more numerous than have been ever since. For *Ninus* King of *Assyria* brought against the *Bactrians* 700000 foot, 200000 horse, 10600 Chariots. *Semiramis* his successor led against the *Indians* 1300000 foot, 500000 horse, 100000 Chariots, and as many upon Camels: And it is said, *Staurobates*, the *Indian* King, met her with greater forces, than she brought against him. All which was performed within less than four hundred years after the Flood.

Now if any imagine the unity of their language did hinder their dispersion before the Flood, we confess it some hindrance at first, but not much afterward. For though it might restrain their dispersion, it could not their populosity; which necessarily requireth transmigration and emission of Colonies; as we read of *Romans*, *Greeks*, *Phœnicians* in ages past, and have beheld examples thereof, in our days. We may also observe that after the Flood before the confusion of tongues, Men began to disperse: for it is said, they journeyed towards the East: and the Scripture it self expresseth a necessity conceived of their dispersion, for the intent of erecting the Tower is so delivered in the text, *Lest we be scattered abroad upon the face of the Earth.*

Whether any Islands before the Flood.

Again, If any apprehend the plantation of the Earth more easie in regard of Navigation and shipping discovered since the Flood, whereby the Islands and divided parts of the Earth are now inhabited; he must consider, that whether there were Islands or no before the Flood, is not yet determined, and is with probability denied by very learned Authors.

Lastly, If we shall fall into apprehension that it was less inhabited, because it is said in the sixth of *Genesis* about 120 years before the Flood, *And it came to pass that when Men began to multiply upon the face of the Earth.* Beside that this may be only meant of the race of *Cain*, it will not import they were not multiplied before, but that they were at that time plentifully encreased; for so is the same word used in other parts of Scripture. And so is it afterward in the 9 Chapter said, that *Noah began to be an husbandman*, that is, he was so, or earnestly performed the Acts thereof; so it is said of our Saviour, that he *began to cast them out that bought and sold in the Temple*, that is, he actually cast them out, or with alacrity effected it.

Thus have I declared some private and probable conceptions in the enquiry of this truth; but the certainty hereof let the Arithmetick of the last

laſt day determine; and therefore expect no further belief than probability and reaſon induce. Only deſire Men would not ſwallow dubioſities for certainties, and receive as Principles points mainly controvertible; for we are to adhere unto things doubtful in a dubious and opinionative way. It being reaſonable for every Man to vary his opinion according to the variance of his reaſon, and to affirm one day what he denied another. Wherein although at laſt we miſs of truth, we die notwithſtanding in harmleſs and inoffenſive errors; becauſe we adhere unto that, whereunto the examen of our reaſons, and honeſt enquiries induce us.

CHAP. VII.

Of Eaſt, and Weſt.

THE next ſhall be of Eaſt and Weſt; that is, the proprieties and conditions aſcribed unto Regions reſpectively unto thoſe ſituations; which hath been the obvious conception of Philoſophers and Geographers, magnifying the condition of *India*, and the Eaſtern Countries, above the ſetting and occidental Climates: ſome aſcribing hereto the generation of Gold, precious ſtones and ſpices, others the civility and natural endowments of Men; conceiving the bodies of this ſituation to receive a ſpecial impreſſion from the firſt ſalutes of the Sun, and ſome appropriate influence from his aſcendent and oriental radiations. But theſe proprieties, affixed unto bodies, upon conſiderations reduced from Eaſt, Weſt, or thoſe obſervable points of the Sphere, how ſpecious and and plauſible ſoever, will not upon enquiry be juſtified from ſuch foundations

For to ſpeak ſtrictly, there is no Eaſt and Weſt in nature, nor are thoſe abſolute and invariable, but reſpective and mutable points, according unto different longitudes, or diſtant parts of habitation, whereby they ſuffer many and conſiderable variations. For firſt, unto ſome the ſame part will be Eaſt or Weſt in reſpect of one another, that is, unto ſuch as inhabit the ſame parallel, or differently dwell from Eaſt to Weſt. Thus as unto *Spain*, *Italy* lyeth Eaſt, unto *Italy Greece*, unto *Greece Perſia*, and unto *Perſia China*; ſo again unto the Country of *China*, *Perſia* lyeth Weſt, unto *Perſia Greece*, unto *Greece Italy*, and unto *Italy Spain*. So that the ſame Countrey is ſometimes Eaſt and ſometimes Weſt; and *Perſia* though Eaſt unto *Greece*, yet is it Weſt unto *China*.

Unto other habitations the ſame point will be both Eaſt and Weſt; as unto thoſe that are *Antipodes* or ſeated in points of the Globe diametrically oppoſed. So the *Americans* are Antipodal unto the *Indians*, and ſome part of *India* is both Eaſt and Weſt unto *America*, according as it ſhall be regarded from one ſide or the other, to the right or to the left; and ſetting out from any middle point, either by Eaſt or Weſt, the diſtance unto the place intended is equal, and in the ſame ſpace of time in nature alſo performable.

To a third that have the Poles for their vertex, or dwell in the poſition of a parallel ſphere, there will be neither Eaſt nor Weſt, at leaſt the greateſt part of the year. For if (as the name *Oriental* implyeth) they ſhall account that part to be Eaſt where ever the Sun ariſeth, or that Weſt where the Sun is occidental or ſetteth; almoſt half the year they have neither the one nor the other. For half the year it is below their Horizon, and the other half it is continually above it, and circling round about them interſecteth not the Horizon, nor leaveth any part for this compute. And if (which will ſeem very reaſonable) that part ſhould be termed the Eaſtern point, where the Sun at Æquinox, and but once in the year ariſeth,

yet will this alſo diſturb the cardinal accounts, nor will it with propriety admit that appellation. For that ſurely cannot be accounted Eaſt which hath the South on both ſides; which notwithſtanding this poſition muſt have. For if unto ſuch as live under the Pole, that be only North which is above them, that muſt be Southerly which is below them, which is all the other portion of the Globe, beſide that part poſſeſſed by them. And thus theſe points of Eaſt and Weſt being not abſolute in any, reſpective in ſome, and not at all relating unto others; we cannot hereon eſtabliſh ſo general conſiderations, nor reaſonably erect ſuch immutable aſſertions, upon ſo unſtable foundations.

Now the ground that begat or promoted this conceit, was firſt a miſtake in the apprehenſion of Eaſt and Weſt, conſidering thereof as of the North and South, and computing by theſe as invariably as by the other; but herein, upon ſecond thoughts, there is a great diſparity. For the North and Southern Pole, are the invariable terms of that Axis whereon the Heavens do move; and are therefore incommunicable and fixed points, whereof the one is not apprehenſible in the other. But with Eaſt and Weſt it is quite otherwiſe: for the revolution of the Orbs being made upon the Poles of North and South, all other points about the Axis are mutable; and whereſoever therein the Eaſt point be determined, by ſucceſſion of parts in one revolution every point becometh Eaſt. And ſo if where the Sun ariſeth, that part be termed Eaſt, every habitation differing in longitude, will have this point alſo different; in as much as the Sun ſucceſſively ariſeth unto every one.

What the Northern and Southern Poles be.

The ſecond ground, although it depend upon the former, approacheth nearer the effect; and that is the efficacy of the Sun, ſet out and divided according to priority of aſcent; whereby his influence is conceived more favourable unto one Countrey than another, and to felicitate *India* more than any after. But hereby we cannot avoid abſurdities, and ſuch as infer effects controulable by our ſenſes. For firſt, by the ſame reaſon that we affirm the *Indian* richer than the *American*, the *American* will alſo be more plentiful than the *Indian*, and *England* or *Spain* more fruitful than *Hiſpaniola* or *golden Caſtle*; in as much as the Sun ariſeth unto the one ſooner than the other: and ſo accountably unto any Nation ſubjected unto the ſame parallel, or with a conſiderable diverſity of longitude from each other.

Secondly, An unſufferable abſurdity will enſue; for thereby a Country may be more fruitful than it ſelf: For *India* is more fertile than *Spain*, becauſe more Eaſt, and that the Sun ariſeth firſt unto it: *Spain* likewiſe by the ſame reaſon more fruitful than *America*, and *America* than *India*: ſo that *Spain* is leſs fruitful than that Countrey, which a leſs fertile Country than it ſelf excelleth.

Laſtly, If we conceive the Sun hath any advantage by priority of aſcent, or makes thereby one Country more happy than another, we introduce injuſtifiable determinations, and impoſe a natural partiality on that Luminary, which being equidiſtant from the Earth, and equally removed in the Eaſt as in the Weſt, his Power and Efficacy in both places muſt be equal, as *Boëtius* hath taken notice, and *Scaliger* hath graphically declared. Some have therefore forſaken this refuge of the Sun, and to ſalve the effect have recurred unto the influence of the Stars, making their activities National, and appropriating their Powers unto particular regions. So *Cardan* conceiveth, the tail of *Urſa Major* peculiarly reſpecteth *Europe*: whereas indeed once in 24 hours it alſo abſolveth its courſe over *Aſia* and *America*. And therefore it will not be eaſie to apprehend thoſe Stars peculiarly glance on us, who muſt of neceſſity carry a common eye and regard unto all Countries, unto whom their revolution and verticity is alſo common.

De gemmis exercitat.

The effects therefore or different productions in ſeveral Countries, which we impute unto the action of the Sun, muſt ſurely have nearer and more immediate cauſes than that Luminary. And theſe if we place in the propriety of clime, or condition of ſoil wherein they are produced,

ced, we ſhall more reaſonably proceed, than they who aſcribe them unto the activity of the Sun. Whoſe revolution being regular, it hath no power nor efficacy peculiar from its orientality, but equally diſperſeth his beams unto all, which equally, and in the ſame reſtriction, receive his luſtre. And being an univerſal and indefinite agent, the effects or productions we behold, receive not their circle from his cauſality, but are determined by the principles of the place, or qualities of that region which admits them. And this is evident not only in gemms, minerals, and metals, but obſervable in plants and animals; whereof ſome are common unto many Countries, ſome peculiar unto one, ſome not communicable unto another. For the hand of God that firſt created the Earth, hath with variety diſpoſed the principles of all things; wiſely contriving them in their proper ſeminaries, and where they beſt maintain the intention of their ſpecies; whereof if they have not a concurrence, and be not lodged, in a convenient matrix, they are not excited by the efficacy of the Sun; or failing in particular cauſes, receive a relief or ſufficient promotion from the univerſal. For although ſuperiour powers co-operate with inferiour activities, and may (as ſome conceive) carry a ſtroke in the plaſtick and formative draught of all things, yet do their determinations belong unto particular agents, and are defined from their proper principles. Thus the Sun which with us is fruitful in the generation of Frogs, Toads and Serpents, to this effect proves impotent in our neighbour Iſland; wherein as in all other, carrying a common aſpect, it concurreth but unto prediſpoſed effects; and only ſuſcitates thoſe forms, whoſe determinations are ſeminal, and proceed from the *Idea* of themſelves.

Whence proceed the different commodities of ſeveral Countries.

Now whereas there be many obſervations concerning Eaſt, and divers conſiderations of Art which ſeem to extol the quality of that point; if rightly underſtood they do not really promote it. That the Aſtrologer takes account of Nativities from the Aſcendant, that is, the firſt houſe of the Heavens, whoſe beginning is toward the Eaſt, it doth not advantage the conceit. For he eſtabliſheth not his Judgment upon the orientality thereof, but conſidereth therein his firſt aſcent above the Horizon; at which time its efficacy becomes obſervable, and is conceived to have the ſignification of life, and to reſpect the condition of all things, which at the ſame time ariſe from their cauſes, and aſcend to their Horizon with it. Now this aſcenſion indeed falls out reſpectively in the Eaſt: but as we have delivered before, in ſome poſitions there is no Eaſtern point from whence to compute theſe aſcenſions. So is it in a parallel ſphere: for unto them ſix houſes are continually depreſſed, and ſix never elevated: and the Planets themſelves, whoſe revolutions are of more ſpeed, and influences of higher conſideration, muſt find in that place a very imperfect regard; for half their period they abſolve above, and half beneath the Horizon. And ſo for ſix years, no Man can have the happineſs to be born under *Jupiter*: and for fifteen together all muſt eſcape the aſcendant dominion of *Saturn*.

Why Aſtrological judgment upon Nativities be taken from the Aſcendant.

That *Ariſtotle* in his Politicks, commends the ſituation of a City which is open towards the Eaſt, and admitteth the raies of the riſing Sun, thereby is implied no more particular efficacy than in the Weſt: But that poſition is commended, in regard the damps and vaporous exhalations ingendered in the abſence of the Sun, are by his returning raies the ſooner diſpelled; and Men thereby more early enjoy a clear and healthy habitation. Upon the like conſiderations it is, that *Marcus Varro* commendeth the ſame ſituation, and expoſeth his farm unto the equinoxial aſcent of the Sun, and that *Palladius* adviſeth the front of his edifice ſhould ſo reſpect the South, that in the firſt angle it receive the riſing raies of the Winter Sun, and decline a little from the Winter ſetting thereof. And concordant hereunto is the inſtruction of *Columella De poſitione villæ*: which he contriveth into Summer and Winter habitations, ordering that the Winter lodgings regard the winter aſcent of the Sun,

De re Ruſtica.

Sun, that is South-East; and the rooms of repast at supper, the Æquinoxial setting thereof, that is, the West: that the Summer lodgings regard the Æquinoxial Meridian: but the rooms of cœnation in the Summer, he obverts unto the Winter ascent; that is, South-east; and the Balnearies or bathing places, that they may remain under the Sun until evening, he exposeth unto the Summer setting, that is, North-West; in all which although the cardinal points be introduced, yet is the consideration Solary, and only determined unto the aspect or visible reception of the Sun.

Jews and *Mahometans* in these and our neighbour parts are observed to use some gestures towards the East, as at their benediction, and the killing of their meat. And though many ignorant spectators, and not a few of the Actors conceive some Magick or Mysterie therein, yet is the Ceremony only Topical, and in a memorial relation unto a place they honour. So the *Jews* do carry a respect and cast an eye upon *Jerusalem*: for which practice they are not without the example of their fore-
Dan. 6. fathers, and the encouragement of their wise King; For so it is said that *Daniel went into his House, and his windows being opened towards Jerusalem, he kneeled upon his knees three times a day, and prayed.* So is it expressed in the prayer of *Solomon, What prayer or supplication soever be made by any Man, which shall spread forth his hands towards this House; if thy people go out to battle, and shall pray unto the Lord towards the City which thou hast chosen, and towards the House which I have chosen to build for thy Name, then hear thou in Heaven their prayer and their supplication, and maintain their cause.* Now the observation hereof, unto the Jews that are dispersed Westward, and such as most converse with us, directeth their regard unto the East: But the words of *Solomon* are appliable unto all quarters of Heaven: and by the Jews of the East and South must be regarded in a contrary position. So *Daniel* in *Babylon* looking toward *Jerusalem* had his face toward the West. So the Jews in their own land looked upon it from all quarters. For the Tribe of *Judah* beheld it to the North: *Manasses*, *Zabulon*, and *Napthali* unto the South: *Reuben* and *Gad*
Luke 12. unto the West; only the Tribe of *Dan* regarded it directly or to the due East. So when it is said, *When you see a cloud rise out of the West, you say there cometh a shower, and so it is*; the observation was respective unto *Judea*: nor is this a reasonable illation, in all other Nations whatsoever: For the Sea lay West unto that Country, and the winds brought rain from that quarter; But this consideration cannot be transferred unto *India* or *China*, which have a vast Sea Eastward; and a vaster Continent toward the West. So like-
Job. wise when it is said in the vulgar Translation, *Gold cometh out of the North*, it is no reasonable inducement unto us and many other Countries, from some particular mines septentrional unto his situation, to search after that metal in cold and Northern regions, which we most plentifully discover in hot and Southern habitations.

For the *Mahometans* as they partake with all Religions in something, so they imitate the *Jews* in this. For in their observed gestures, they hold a regard unto *Mecha* and *Medina Talnaby*, two Cities in *Arabia fœlix*; where their Prophet was born and buried; whither they perform their pilgrimages: and from whence they expect he should return again. And therefore they direct their faces unto these parts; which unto the *Mahometans* of *Barbary* and *Egypt* lie East, and are in some point thereof unto many other parts of *Turkie*. Wherein notwithstanding there is no Oriental respect; for with the same devotion on the other side they regard these parts toward the West, and so with variety whereso ever they are seated, conforming unto the ground of their conception.

Fourthly, Whereas in the ordering of the Camp of *Israel*, the East quarter is appointed unto the noblest Tribe, that is, the Tribe of *Judah*, accord-
Numb. 3. ing to the command of God, *In the East-side toward the rising of the Sun shall the Standard of the Tribe of Judah pitch*: it doth not peculiarly extol that point. For herein the East is not to be taken strictly, but as it signifieth or implieth the foremost place; for *Judah* had the Van, and many Countries through which

which they paſſed, were ſeated Eaſterly, unto them. Thus much is implied by the Original, and expreſſed by Tranſlations which ſtrictly conform thereto: So *Tremelius*, *Caſtra habentium ab anteriore parte Orientem verſus, vexillum eſto caſtrorum Judæ*; ſo hath *R. Solomon Jarchi* expounded it, the foremoſt or before, is the Eaſt quarter, and the Weſt is called behind. And upon this interpretation may all be ſalved that is alledgeable againſt it. For if the Tribe of *Judah* were to pitch before the Tabernacle at the Eaſt, and yet to march firſt, as is commanded, *Numb.* 10. there muſt enſue a diſorder in the Camp, nor could they conveniently obſerve the execution thereof: For when they ſet out from *Mount Sinai*, where the Command was delivered, they made Northward unto *Rithmah*; from *Riſſah* unto *Eziongaber* about fourteen ſtations they marched South: From *Almon Diblathaim* through the mountains of *Yabarim* and Plains of *Moab* towards *Jordan* the face of their march was Weſt: So that if *Judah* were ſtrictly to pitch in the Eaſt of the Tabernacle, every night he encamped in the Rear; and if (as ſome conceive) the whole Camp could not be leſs than twelve miles long, it had been prepoſterous for him to have marched foremoſt, or ſet out firſt who was moſt remote from the place to be approached.

Fifthly, That Learning, Civility and Arts had their beginning in the Eaſt, it is not imputable either to the action of the Sun, or its Orientality, but the firſt plantation of Man in thoſe parts; which unto *Europe* do carry the reſpect of Eaſt. For on the Mountains of *Ararat*, that is, part of the hill *Taurus*, between the *Eaſt-Indies* and *Scythia*, as Sir *W. Raleigh* accounts it, the Ark of *Noah* reſted; from the Eaſt they travelled that built the Tower of *Babel*: from thence they were diſperſed and ſucceſſively enlarged, and Learning, good Arts, and all Civility communicated. The progreſſion whereof was very ſenſible; and if we conſider the diſtance of time between the confuſion of *Babel*, and the Civility of many parts now eminent therein, it travelled late and ſlowly into our quarters. For notwithſtanding the learning of *Bardes* and *Druides* of elder times, he that ſhall peruſe that work of *Tacitus de moribus Germanorum*, may eaſily diſcern how little Civility two thouſand years had wrought upon that Nation: the like he may obſerve concerning our ſelves from the ſame Author in the life of *Agricola*, and more directly from *Strabo*, who to the diſhonour of our Predeceſſors, and the diſparagement of thoſe that glory in the Antiquity of their Anceſtors, affirmeth the *Britains* were ſo ſimple, that though they abounded in Milk, they had not the Artifice of Cheeſe.

Where the Ark reſted as ſome think.

Laſtly, That the Globe it ſelf is by Coſmographers divided into Eaſt and Weſt, accounting from the firſt Meridian, it doth not eſtabliſh this conceit. For that diviſion is not naturally founded, but artificially ſet down, and by agreement; as the apteſt terms to define or commenſurate the longitude of places. Thus the ancient Coſmographers do place the diviſion of the Eaſt and Weſtern Hemiſphere, that is, the firſt term of longitude, in the *Canary* or fortunate Iſlands; conceiving theſe parts the extreameſt habitations Weſtward: But the Moderns have altered that term, and tranſlated it unto the *Azores* or Iſlands of St. *Michael*; and that upon a plauſible conceit of the ſmall or inſenſible variation of the Compaſs in thoſe parts, wherein nevertheleſs, and though upon ſecond invention, they proceed upon a common and no appropriate foundation; for even in that Meridian farther North or South the Compaſs obſervably varieth; and there are alſo other places wherein it varieth not, as *Alphonſo* and *Rodoriges de Lago* will have it about *Capo de las Agullas* in *Africa*; as *Maurolycus* affirmeth in the ſhore of *Peloponneſus* in *Europe*; and as *Gilbertus* averreth, in the midſt of great regions, in moſt parts of the Earth.

CHAP.

CHAP. VIII.

Of the River Nilus.

HEreof uncontroulably and under general consent many opinions are passant, which notwithstanding upon due examination, do admit of doubt or restriction. It is generally esteemed, and by most unto our days received, that the River of *Nilus* hath seven ostiaries; that is, by seven Chanels disburdeneth it self into the Sea. Wherein notwithstanding, beside that we find no concurrent determination of ages past, and a positive and undeniable refute of these present; the affirmative is mutable, and must not be received without all limitation.

For some, from whom we receive the greatest illustrations of Antiquity, have made no mention hereof; So *Homer* hath given no number of its Chanels, nor so much as the name thereof in use with all Historians. *Eratosthenes* in his description of *Egypt* hath likewise passed them over. *Aristotle* is so indistinct in their names and numbers, that in the first of *Meteors* he plainly affirmeth the Region of *Egypt* (which we esteem the ancientest Nation in the World) was a meer gained ground, and that by the setling of mud and limous matter brought down by the River *Nilus*; that which was at first a continued Sea, was raised at last into a firm and habitable Country. The like opinion he held of *Mæotis Palus*, that by the Floods of *Tanais* and Earth brought down thereby, it grew observably shallower in his days, and would in process of time become a firm land. And though his conjecture be not as yet fulfilled, yet is the like observable in the River *Gihon*, a branch of *Euphrates* and River of Paradise; which having in former Ages discharged it self into the *Persian* Sea, doth at present fall short; being lost in the lakes of *Chaldea*, and hath left between them and the Sea, a large and considerable part of dry land.

How *Egypt* first became firm land.

Others expresly treating hereof, have diversly delivered themselves; *Herodotus* in his *Euterpe* makes mention of seven; but carelesly of two thereof; that is *Bolbitinum*, and *Bucolicum*; for these, saith he, were not the natural currents, but made by Art for some occasional convenience. *Strabo* in his Geography naming but two, *Peleusiacum* and *Canopicum*; plainly affirmeth there were many more than seven; *Inter hæc alia quinque*, &c. There are (saith he) many remarkable towns within the currents of *Nile*, especially such which have given the names unto the ostiaries thereof, not unto all, for they are eleven, and four besides, but unto seven and most considerable; that is, *Canopicum*, *Bolbitinum*, *Selenneticum*, *Sebenneticum*, *Pharniticum*, *Mendesium*, *Taniticum* and *Pelusium*, wherein to make up the number, one of the artificial chanels of *Herodotus* is accounted. *Ptolomy* an *Egyptian*, and born at the *Pelusian* mouth of *Nile*, in his Geography maketh nine: and in the third Map of *Africa*, hath unto their mouths prefixed their several names; *Heracleoticum*, *Bolbitinum*, *Sebenneticum*, *Pineptum*, *Diolcos*, *Pathmeticum*, *Mendesium*, *Taniticum*, *Peleusiacum*: wherein notwithstanding there are no less than three different names from those delivered by *Pliny*. All which considered, we may easily discern that Authors accord not either in name or number; and must needs confirm the Judgement of *Maginus*, *de Ostiorum Nili numero & nominibus, valde antiqui scriptores discordant.*

Modern Geographers and Travellers do much abate of this number, for as *Maginus* and others observe, there are now but three or four mouths thereof; as *Gulielmus Tyrius* long ago, and *Bellonius* since, both ocular enquirers, with others have attested. For below *Cairo*, the River divides it self into four branches, whereof two make the chief and navigable streams, the one running to *Peluſium* of the Ancients, and now *Damiata*; the other unto *Canopium*,

Canopium, and now *Roſcetta*; the other two, ſaith Mr. *Sandys*, do run between theſe; but poor in water. Of thoſe ſeven mentioned by *Herodotus*, and thoſe nine by *Ptolomy*, theſe are all I could either ſee or hear of. Which much confirmeth the teſtimony of the Biſhop of *Tyre*, a diligent and ocular Enquirer; who in his holy war doth thus deliver himſelf. We wonder much at the Ancients, who aſſigned ſeven mouths unto *Nilus*: which we can no otherwiſe ſalve, than that by proceſs of time, the face of places is altered, and the river hath loſt his chanels; or that our fore-fathers did never obtain a true account thereof. *Sand.* Relation.

And therefore when it is ſaid in holy Scripture, *The Lord ſhall utterly deſtroy the tongue of the Egyptian Sea, and with his mighty wind he ſhall ſhake his hand over the river, and ſhall ſmite it in the ſeven ſtreams, and make men go over dry-ſhod*: If this expreſſion concerneth the river *Nilus*, it muſt only reſpect the ſeven principal ſtreams. But the place is very obſcure, and whether thereby be not meant the river *Euphrates*, is not without ſome controverſie; as is collectible from the ſubſequent words; *And there ſhall be an high way for the remnant of his people, that ſhall be left from Aſſyria*; and alſo from the bare name *River*, emphatically ſignifying *Euphrates*, and thereby the diviſion of the *Aſſyrian* Empire into many fractions, which might facilitate their return: as *Grotius* * hath obſerved; and is more plainly made out, if the † *Apocrypha* of *Eſdras*, and that of the * *Apocalypſe* have any relation hereto. Iſa. 11. 15, 16. * *Gr. Not. in Iſaiam.* † 2 Eſdr. 13. 43, 47. * Apoc. 16. 12.

Laſtly, Whatever was or is their number, the contrivers of Cards and Maps afford us no aſſurance or conſtant deſcription therein. For whereas *Ptolomy* hath ſet forth nine, *Hondius* in his Map of *Africa*, makes but eight, and in that of *Europe* ten. *Ortelius* in the Map of the *Turkiſh* Empire, ſetteth down eight, in that of *Egypt* eleven; and *Maginus* in his Map of that Country hath obſerved the ſame number. And if we enquire farther, we ſhall find the ſame diverſity and diſcord in divers others.

Thus may we perceive that this account was differently related by the Ancients, that it is undeniably rejected by the Moderns, and muſt be warily received by any. For if we receive them all into account, they were more than ſeven; if only the natural ſluces, they were fewer; and however we receive them, there is no agreeable and conſtant deſcription thereof. And therefore how reaſonable it is to draw continual and durable deductions from alterable and uncertain foundations; let them conſider who make the gates of *Thebes*, and the mouths of this River a conſtant and continued periphraſis for this number, and in their Poetical expreſſions do give the River that Epithete unto this day.

The ſame River is alſo accounted the greateſt of the earth, called therefore *Fluviorum pater*, and *totius Orbis maximus*, by *Ortelius*: If this be true, many Maps muſt be corrected, or the relations of divers good Authors renounced.

For firſt, In the delineations of many Maps of *Africa*, the River *Niger* exceedeth it about ten degrees in length, that is, no leſs than ſix hundred miles. For ariſing beyond the Æquator, it maketh Northward almoſt 15 degrees, and deflecting after Weſtward, without Meanders, continueth a ſtraight courſe about 40 degrees; and at length with many great currents diſburdeneth it ſelf into the Occidental Ocean. Again, if we credit the deſcriptions of good Authors, other Rivers excell it in length, or breadth, or both. *Arrianus* in his hiſtory of *Alexander*, aſſigneth the firſt place unto the River *Ganges*; which truly according unto later relations, if not in length, yet in breadth and depth may be granted to excel it. For the magnitude of *Nilus* conſiſteth in the dimenſion of longitude, and is inconſiderable in the other; what ſtream it maintaineth beyond *Syene* or *Eſna*, and ſo forward unto its original, relations are very imperfect: but below theſe places, and farther removed from the head, the current is but narrow, and we read in the Hiſtory of the *Turks*, the *Tartar* horſemen of *Selimus*, ſwam over the *Nile* from *Cairo*, to meet the forces of *Tonumbeus*. *Baptiſta Scortia* expreſly treating hereof, preferreth the River of *Plate* in *America*, for that, as *Maffeus* hath delivered, falleth into the Ocean in the latitude of forty leagues; and with that ſource and plenty, that men at Sea do taſt freſh water, before they approach ſo near *De natura & incremento Nili.*

as to discover the land. So is it exceeded by that which by *Cardan* is termed the greatest in the world, that is the River *Oregliana* in the same Continent; which, as *Maginus* delivereth, hath been navigated 6000 miles; and opens in a chanel of ninety leagues broad; so that, as *Acosta*, an ocular witness, recordeth, they that sail in the middle, can make no land of either side.

Now the ground of this assertion was surely the magnifying esteem of the Ancients, arising from the indiscovery of its head. For as things unknown seem greater than they are, and are usually received with amplifications above their nature; so might it also be with this River, whose head being unknown and drawn to a proverbial obscurity, the opinion thereof became without bounds; and men must needs conceit a large extent of that to which the discovery of no man had set a period. And this an usual way to give the superlative unto things of eminency in any kind; and when a thing is very great, presently to define it to be the greatest of all. Whereas indeed Superlatives are difficult; whereof there being but one in every kind, their determinations are dangerous, and must not be made without great circumspection.

The greatest Cities of the World.

So the City of *Rome* is magnified by the *Latines* to be the greatest of the earth; but time and Geography informs us, that *Cairo* is bigger, and *Quinsay* in *China* far exceedeth both. So is *Olympus* extolled by the *Greeks*, as an hill attaining unto heaven; but the enlarged Geography of after-times, makes slight account hereof, when they discourse of *Andes* in *Peru*, or *Teneriffa* in the *Canaries*.

The highest Hills.

And we understand by a person who hath lately had a fair opportunity to behold the magnified mount *Olympus*, that it is exceeded by some peaks of the *Alpes*. So have all Ages conceived, and most are still ready to swear, the Wren is the least of Birds; yet the discoveries of *America*, and even of our own Plantations have shewed us one far less; that is, the Humbird, not much exceeding a Beetle. And truly, for the least and greatest, the highest and the lowest of every kind, as it is very difficult to define them invisible things; so is it to understand in things invisible. Thus is it no easie lesson to comprehend the first matter, and the affections of that which is next neighbour unto nothing, but impossible truly to comprehend God, who indeed is all in all. For things as they arise unto perfection, and approach unto God, or descend to imperfection, and draw nearer unto nothing, fall both imperfectly into our apprehensions; the one being too weak for our conceptions, our conceptions too weak for the other.

Tomintio.

Thirdly, Divers conceptions there are concerning its increment or inundation. The first unwarily opinions, that this encrease or annual overflowing is proper unto *Nile*, and not agreeable unto any other River; which notwithstanding is common unto many Currents of *Africa*. For about the same time the River *Niger* and *Zaire* do overflow; and so do the Rivers beyond the mountains of the Moon, as *Suama*, and *Spirito Santo*. And not only these in *Africa*, but some also in *Europe* and *Asia*: for so it is reported of *Menan* in *India*, and so doth *Botero* report of *Duina* in *Livonia*; and the same is also observable in the river *Jordan* in *Judea*; for so is it delivered, that *Jordan overflowth all his banks in the time of harvest*.

Josh. 3.

The effect indeed is wonderful in all, and the causes surely best resolvable from observations made in the Countries themselves, the parts through which they pass, or whence they take their Original. That of *Nilus* hath been attempted by many, and by some to that despair of resolution, that they have only referred it unto the Providence of God, and his secret manuduction of all things unto their ends. But divers have attained the truth, and the cause alledged by *Diodorus*, *Seneca*, *Strabo*, and others, is allowable; that the inundation of *Nilus* in *Egypt* proceeded from the rains in *Æthiopia*, and the mighty source of waters falling towards the fountains thereof. For this inundation unto the *Egyptians* happeneth when it is winter unto the *Æthiopians*; which habitations, although they have no cold Winter (the Sun being no farther removed from them in *Cancer*, than unto us in *Taurus*) yet is the fervour of the air so well remitted, as it admits a sufficient generation of vapors, and plenty of showers ensuing thereupon. This Theory of the Ancients is since confirmed by experience of the Moderns; by *Franciscus Alvarez*,

The cause of the overflowing of *Nilus*.

who

who lived long in thoſe parts, and left a deſcription of *Æthiopia*; affirming that from the middle of *June* unto *September*, there fell in his time continual rains. As alſo *Antonius Ferdinandus*, who in an Epiſtle written from thence, and noted by *Codignus*, affirmeth, that during the Winter, in thoſe Countries there paſſed no day without rain.

Now this is alſo uſual, to tranſlate a remarkable quality into a propriety, and where we admire an effect in one, to opinion there is not the like in any other. With theſe conceits do common apprehenſions entertain the antidotal and wondrous condition of *Ireland*; conceiving only in that land an immunity from venemous creatures: but unto him that ſhall further enquire, the ſame will be affirmed of *Creta*, memorable in ancient ſtories, even unto fabulous cauſes, and benediction from the birth of *Jupiter*. The ſame is alſo found in *Ebuſus* or *Eviſa*, an Iſland near *Majorca* upon the coaſt of *Spain*. With theſe apprehenſions do the eyes of neighbour Spectators behold *Ætna*, the flaming mountain in *Sicilia*; but Navigators tell us there is a burning mountain in *Iſland*; a more remarkable one in *Teneriffa* of the *Canaries*, and many Vulcano's or fiery Hills elſewhere. Thus *Crocodiles* were thought to be peculiar unto *Nile*, and the opinion ſo poſſeſſed *Alexander*, that when he had diſcovered ſome in *Ganges*, he fell upon a conceit he had found the head of *Nilus*; but later diſcoveries affirm they are not only in *Aſia* and *Africa*, but very frequent in ſome rivers of *America*.

Another opinion confineth its Inundation, and poſitively affirmeth, it conſtantly encreaſeth the ſeventeenth day of *June*; wherein perhaps a larger form of ſpeech were ſafer, than that which punctually prefixeth a conſtant day thereto. For this expreſſion is different from that of the Ancients, as *Herodotus*, *Diodorus*, *Seneca*, *&c.* delivering only that it happeneth about the entrance of the Sun into *Cancer*; wherein they warily deliver themſelves, and reſerve a reaſonable latitude. So when *Hippocrates* ſaith, *Sub Cane & ante Canem difficiles ſunt purgationes*: There is a latitude of days compriſed therein; for under the Dog-ſtar he containeth not only the day of its aſcent, but many following, and ſome ten days preceeding. So *Ariſtotle* delivers the affections of animals: with the wary terms of *Circa*, *& magna ex parte*: and when *Theodorus* tranſlateth that part of his *Coeunt Thunni & Scombri menſe Februario poſt Idus; pariunt Junio ante Nonas*: *Scaliger* for *ante Nonas*, renders it *Junii initio*; becauſe that expoſition affordeth the latitude of divers days: For affirming it happeneth before the Nones; he alloweth but one day, that is, the Calends; for in the *Roman* account, the ſecond day is the fourth of the Nones of *June*.

Again, Were the day definitive, it had prevented the deluſion of the Devil, nor could he have gained applauſe by its prediction; who notwithſtanding (as *Athanaſius* in the life of *Anthony* relateth) to magnifie his knowledge in things to come, when he perceived the rains to fall in *Æthiopia*, would preſage unto the *Egyptians* the day of its inundation. And this would alſo make uſeleſs that natural experiment obſerved in earth or ſand about the River; by the weight whereof (as good Authors report) they have unto this day a knowledge of its increaſe.

Laſtly, It is not reaſonable from variable and unſtable cauſes, to derive a fixed and conſtant effect, and ſuch are the cauſes of this inundation, which cannot indeed be regular, and therefore their effects not prognoſticable like Eclipſes. For depending upon the clouds and deſcent of ſhowers in *Æthiopia*, which have their generation from vaporous exhalations, they muſt ſubmit their exiſtence unto contingencies, and endure anticipation and receſſion from the moveable condition of their cauſes. And therefore ſome years there hath been no encreaſe at all, as ſome conceive in the years of Famin under *Pharaoh*, as *Seneca*, and divers relate of the eleventh year of *Cleopatra*; nor nine years together, as is teſtified by *Caliſthenes*. Some years it hath alſo retarded, and come far later than uſually it was expected, as according to *Sozomen* and *Nicephorus* it happened in the days of *Theodoſius*; whereat the people were ready to mutiny, becauſe they might not ſacrifice unto the River, according to the cuſtom of their Predeceſſors.

Now this is also an usual way of mistake, and many are deceived who too strictly construe the temporal considerations of things. Thus books will tell us, and we are made to believe, that the fourteenth year males are seminifical and pubescent; but he that shall enquire into the generality, will rather adhere unto the cautelous assertion of *Aristotle*, that is, *bis septem annis exactis*, and then but *magna ex parte*. That Whelps are blind nine days, and then begin to see, is generally believed, but as we have elsewhere declared, it is exceeding rare, nor do their eye-lids usually open until the twelfth, and sometimes not before the fourteenth day. And to speak strictly, an hazardable determination it is unto fluctuating and indifferent effects, to affix a positive Type or Period. For in effects of far more regular causalities, difficulties do often arise, and even in time it self, which measureth all things, we use allowance in its commensuration. Thus while we conceive we have the account of a year in 365 days, exact enquirers and Computists will tell us, that we escape 6 hours, that is, a quarter of a day. And so in a day which every one accounts 24 hours, or one revolution of the Sun; in strict account we must allow the addition of such a part as the Sun doth make in his proper motion, from West to East, whereby in one day he describeth not a perfect Circle.

Fourthly, It is affirmed by many, and received by most, that it never raineth in *Egypt*, the river supplying that defect, and bountifully requiting it in its inundation: but this must also be received in a qualified sense, that is, that it rains but seldom at any time in the Summer, and very rarely in the Winter. *But that great showres do sometimes fall upon that Region, beside the Assertion of many Writers, we can confirm from *honourable and ocular testimony, and that not many years past it rained in Grand *Cairo* divers days together.

* That *Egypt* hath rain.
*Sir *William Paston* Baronet.

The same is also attested concerning other parts of *Egypt*, by *Prosper Alpinus*, who lived long in that Country, and hath left an accurate Treatise of the medical practice thereof. *Cayri rarò decidunt pluviæ; Alexandriæ, Peluſiiq; & in omnibus locis mari adjacentibus, pluit largiſſimè & ſæpe*; that is, it raineth seldom at *Cairo*, but at *Alexandria*, *Damiata*, and places near the Sea, it raineth plentifully and often. Whereto we might add the latter testimony of Learned Mr. *Greaves*, in his accurate description of the *Pyramids*.

Exod. 9.

Beside, Men hereby forget the relation of holy Scripture. *Behold I will cauſe it to rain a very great hail, ſuch as hath not been in* Egypt *ſince the foundation thereof, even until now.* Wherein God threatning such a rain as had not happened, it must be presumed they had been acquainted with some before, and were not ignorant of the substance, the menace being made in the circumstance. The same concerning hail is inferrible from *Prosper Alpinus*. *Rariſſimè nix, grando*, it seldom snoweth or haileth. Whereby we must concede that Snow and Hail do sometimes fall, because they happen seldom.

Now this mistake ariseth from a misapplication of the bounds or limits of time, and an undue transition from one unto another; which to avoid, we must observe the punctual differences of time, and so distinguish thereof, as not to confound or lose the one in the other. For things may come to pass, *Semper, Plerumq; Sæpe; aut Nunquam, Aliquando, Raro*; that is Always, or Never, For the most part, or Sometimes, Oft-times, or Seldom. Now the deception is usual which is made by the mis-application of these; men presently concluding that to happen often, which happeneth but sometimes: that never, which happeneth but seldom; and that alway, which happeneth for the most part. So is it said, the Sun shines every day in *Rhodes*, because for the most part it faileth not. So we say and believe that a Chameleon never eateth, but liveth only upon air, whereas indeed it is seen to eat very seldom, but many there are who have beheld it to feed on Flyes. And so it is said, that children born in the eighth month live not, that is, for the most part, but not to be concluded alwaies: nor it seems in former ages in all places; for it is otherwise recorded by *Aristotle* concerning the births of *Egypt*.

Lastly,

Lastly, It is commonly conceived that divers Princes have attempted to cut the *Isthmus* or tract of land which parteth the *Arabian* and *Mediterranean* Sea: but upon enquiry I find some difficulty concerning the place attempted; many with good authority affirming, that the intent was not immediately to unite these Seas, but to make a navigable chanel between the Red Sea and the *Nile*, the marks whereof are extant to this day; it was first attempted by *Sesostris*, after by *Darius*, and in a fear to drown the Country, deserted by them both; but was long after re-attempted and in some manner effected by *Philadelphus*. And so the Grand Signior who is Lord of the Country, conveyeth his Gallies into the Red Sea by the *Nile*; for he bringeth them down to Grand *Cairo*, where they are taken in pieces, carried upon Camels backs, and rejoyned together at *Sues*, his Port and Naval station for that Sea; whereby in effect he acts the design of *Cleopatra*, who after the Battle of *Actium* in a different way would have conveyed her Gallies into the Red Sea.

Lingua maris Ægyptii. Isa. 11. 15.

And therefore that Proverb to cut an *Isthmus*, that is, to take great pains, and effect nothing, alludeth not unto this attempt; but is by *Erasmus* applyed unto several other, as that undertaking of the Cnidians to cut their *Isthmus*, but especially that of *Corinth* so unsuccessfully attempted by many Emperours. The Cnidians were deterred by the peremptory dissuasion of *Apollo*, plainly commanding them to desist; for if God had thought it fit, he would have made that Country an Island at first. But this perhaps will not be thought a reasonable discouragement unto the activity of those spirits which endeavour to advantage Nature by Art, and upon good grounds to promote any part of the Universe; nor will the ill success of some be made a sufficient determent unto others; who know that many learned men affirm, that Islands were not from the beginning, that many have been made since by Art, that some *Isthmus* have been eat through by the Sea, and others cut by the spade: And if policy would permit, that of *Panama* in *America* were most worthy the attempt: it being but few miles over, and would open a shorter cut unto the *East-Indies* and *China*.

Isthmum perfodere.

CHAP. IX.

Of the Red Sea.

Contrary apprehensions are made of the Erythræan or Red Sea; most apprehending a material redness therein, from whence they derive its common denomination; and some so lightly conceiving hereof, as if it had no redness at all, are fain to recur unto other originals of its appellation. Wherein to deliver a distinct account, we first observe that without consideration of colour it is named the *Arabian Gulph*: The Hebrews who had best reason to remember it; do call it *Zuph*, or the weedy Sea, because it was full of sedge, or they found it so in their passage; the *Mahometans* who are now Lords thereof do know it by no other name than the *Gulph* of *Mecha* a City of *Arabia*.

What the Red Sea is.

The stream of Antiquity deriveth its name from King *Erythrus*; so sleightly conceiving of the nominal deduction from Redness, that they plainly deny there is any such accident in it. The words of *Curtius* are plainly beyond Evasion, *Ab Erythro rege inditum est nomen, propter quod ignari rubere aquas credunt*: Of no more obscurity are the words of *Philostratus*, and of later times, *Sabellicus*; *Stultè persuasum est vulgo rubras alicubi esse maris aquas, quin ab Erythro rege nomen pelago inditum.* Of this opinion was *Andreas Corsalius*, *Pliny*, *Solinus*, *Dio Cassius*, who although they denied not all redness, yet did they rely upon the original from King *Erythrus*.

Others

Others have fallen upon the like, or perhaps the ſame conceit under another appellation; deducing its name not from King *Erythrus*, but *Eſau* or *Edom*, whoſe habitation was upon the coaſts thereof. Now *Edom* is as much as *Erythrus*, and the Red Sea no more than the *Idumean*; from whence the poſterity of *Edom* removing towards the Mediterranean coaſt, according to their former nomination by the Greeks were called *Phœnicians* or red men; and from a Plantation and Colony of theirs, an Iſland near *Spain*, was by the Greek deſcribers termed *Erythra*, as is declared by *Strabo* and *Solinus*.

More exactly hereof *Bochartus* and Mr. *Dickinſon*.

Very many omitting the nominal derivation, do reſt in the groſs and literal conception thereof, apprehending a real redneſs and conſtant colour of parts. Of which opinion are alſo they which hold, the Sea receiveth a red and minious tincture from Springs, Wells, and Currents that fall into it; and of the ſame belief are probably many Chriſtians, who conceiving the paſſage of the *Iſraelites* through this Sea to have been the type of Baptiſm, according to that of the Apoſtle, *All were baptized unto Moſes in the cloud, and in the Sea*: for the better reſemblance of the blood of Chriſt, they willingly received it in the apprehenſion of redneſs, and a colour agreeable unto its myſtery: according unto that of *Auſtin*, *Significat mare illud rubrum Baptiſmum Chriſti, unde nobis Baptiſmus Chriſti, niſi ſanguine Chriſti conſecratus?*

1 Cor. 10. 2.

Aug. in Johannem.

But divers Moderns not conſidering theſe conceptions, and appealing unto the Teſtimony of ſenſe, have at laſt determined the point: concluding a redneſs herein, but not in the ſenſe received. Sir *Walter Raleigh* from his own and *Portugal* obſervations, doth place the redneſs of the Sea, in the reflection from red Iſlands, and the redneſs of the earth at the bottom: wherein Coral grows very plentifully, and from whence in great abundance it is tranſported into *Europe*. The obſervations of *Alberquerque*, and *Stephanus de Gama* (as from *Johannes de Bairros*, *Fernandius de Cordova* relateth) derive this redneſs from the colour of the ſand and argillous earth at the bottom; for being a ſhallow Sea, while it rowleth to and fro, there appeareth a redneſs upon the water; which is moſt diſcernable in ſunny and windy weather. But that this is no more than a ſeeming redneſs, he confirmeth by an experiment; for in the reddeſt part taking up a veſſel of water, it differed not from the complexion of other Seas. Nor is this colour diſcoverable in every place of that Sea, for as he alſo obſerveth, in ſome places it is very green, in others white and yellow, according to the colour of the earth or ſand at the bottom. And ſo may *Philoſtratus* be made out, when he ſaith, this Sea is blue; or *Bellonius* denying this redneſs, becauſe he beheld not that colour about *Sues*; or when *Corſalius* at the mouth thereof could not diſcover the ſame.

Now although we have enquired the ground of redneſs in this Sea, yet are we not fully ſatisfied: for what is forgot by many, and known by few, there is another Red Sea whoſe name we pretend not to make but from theſe principles; that is, the *Perſian* Gulph or Bay, which divideth the *Arabian* and *Perſian* ſhore, as *Pliny* hath deſcribed it. *Mare rubrum in duos dividitur ſinus, is qui ab Oriente eſt, Perſicus appellatur*; or as *Solinus* expreſſeth it, *Qui ab Oriente eſt, Perſicus appellatur, ex adverſo unde Arabia eſt, Arabicus*; whereto aſſenteth *Suidas*, *Ortelius*, and many more. And therefore there is no abſurdity in *Strabo* when he delivereth that *Tigris* and *Euphrates* do fall into the Red Sea, and *Fernandius de Cordova* juſtly defendeth his Countryman *Seneca* in that expreſſion;

Et qui renatum prorſus excipiens diem
Tepidum Rubenti Tigrinimmiſcet freto.

Nor hath only the *Perſian* Sea received the ſame name with the *Arabian*, but what is ſtrange, and much confounds the diſtinction, the name thereof is alſo derived from King *Erythrus*; who was conceived to be buried in an Iſland of this Sea, as *Dionyſius*, *Afer*, *Curtius* and *Suidas* do deliver. Which were of no leſs probability than the other, if (as with the

the same authors *Strabo* affirmeth) he was buried near *Caramania* bordering upon the *Persian* Gulph. And if his Tomb was seen by *Nearchus*, it was not so likely to be in the *Arabian* Gulph; for we read that from the River *Indus* he came unto *Alexander* at *Babylon*, some few days before his death. Now *Babylon* was seated upon the River *Euphrates*, which runs into the *Persian* Gulph. And therefore however the Latine expresseth it in *Strabo*, that *Nearchus* suffered much in the *Arabian Sinus*, yet is the original κόλπῳ πέρσικῳ, that is, the Gulf of *Persia*.

That therefore the Red Sea or *Arabian* Gulph received its name from personal derivation, though probable, is but uncertain; that both the Seas of one name should have one common denominator, less probable; that there is a gross and material redness in either, not to be affirmed: that there is an emphatical or appearing redness in one, not well to be denied. And this is sufficient to make good the Allegory of the Christians: and in this distinction may we justifie the name of the Black Sea, given unto *Pontus Euxinus*; the name of *Xanthus*, or the yellow River of *Phrygia*; and the name of *Vermeio*, or the Red Sea in *America*.

CHAP. X.

Of the Blackness of Negroes.

IT is evident not only in the general frame of Nature, that things most manifest unto sense, have proved obscure unto the understanding: But even in proper and appropriate Objects, wherein we affirm the sense cannot err, the faculties of reason most often fail us. Thus of colours in general, under whose gloss and vernish all things are seen, few or none have yet beheld the true nature; or positively set down their incontroulable causes. Which while some ascribe unto the mixture of the Elements, others to the graduality of Opacity and Light; they have left our endeavours to grope them out by twilight, and by darkness almost to discover that whose existence is evidenced by Light. The *Chymists* have laudably reduced their causes unto Sal, Sulphur, and Mercury; and had they made it out so well in this, as in the objects of smell and taste, their endeavours had been more acceptable: For whereas they refer Sapor unto Salt, and Odor unto Sulphur, they vary much concerning colour; some reducing it unto Mercury; some to Sulphur; others unto Salt. Wherein indeed the last conceit doth not oppress the former; and though Sulphur seem to carry the master-stroak, yet Salt may have a strong co-operation. For beside the fixed and terrestrious Salt, there is in natural bodies a *Sal niter* referring unto Sulphur; there is also a volatile or Armoniack Salt, retaining unto Mercury; by which Salts the colours of bodies are sensibly qualified, and receive degrees of lustre or obscurity, superficiality or profundity, fixation or volatility.

The Principles of Colour according to the *Chymists*.

Their general or first Natures being thus obscure, there will be greater difficulties in their particular discoveries; for being farther removed from their simplicities, they fall into more complexed considerations; and so require a subtiler act of reason to distinguish and call forth their natures. Thus although a man understood the general nature of colours, yet were it no easie Problem to resolve, why Grass is green? Why Garlick, Molyes and Porrets have white roots, deep green leaves, and black seeds? Why several docks and sorts of Rheubarb with yellow roots, send forth purple flowers? Why also from Lactary or milky plants which have a white and lacteous juyce dispersed through every part, there arise flowers blue and yellow? Moreover, beside the special and first digressions ordained from the Creation, which might be urged to salve the variety in every species;

Why

Why ſhall the marvel of *Peru* produce its flowers of different colours, and that not once, or conſtantly, but every day, and variouſly? Why Tulips of one colour produce ſome of another, and running through almoſt all, ſhould ſtill eſcape a blue? And laſtly, Why ſome men, yea and they a mighty and conſiderable part of mankind, ſhould firſt acquire and ſtill retain the gloſs and tincture of blackneſs? Which whoever ſtrictly enquires, ſhall find no leſs of darkneſs in the cauſe, than in the effect it ſelf; there ariſing unto examination no ſuch ſatisfactory and unquarrellable reaſons, as may confirm the cauſes generally received; which are but two in number. The heat and ſcorch of the Sun; or the curſe of God on *Cham* and his Poſterity.

The firſt was generally received by the Ancients, who in obſcurities had no higher recourſe than unto Nature, as may appear by a Diſcourſe concerning this point in *Strabo*. By *Ariſtotle* it ſeems to be implied in thoſe Problems which enquire why the Sun makes men black, and not the fire? Why it whitens wax, yet blacks the skin? By the word *Æthiops* it ſelf, applied to the memorableſt Nations of *Negroes*, that is, of a burnt and torrid countenance. The fancy of the Fable infers alſo the Antiquity of the opinion; which deriveth the complexion from the deviation of the Sun; and the conflagration of all things under *Phaeton*. But this opinion though generally embraced, was I perceive rejected by *Ariſtobulus* a very ancient Geographer; as is diſcovered by *Strabo*. It hath been doubted by ſeveral modern Writers, particularly by *Ortelius*; but amply and ſatisfactorily diſcuſſed as we know by no man. We ſhall therefore endeavour a full delivery hereof, declaring the grounds of doubt, and reaſons of denial, which rightly underſtood, may, if not overthrow, yet ſhrewdly ſhake the ſecurity of this Aſſertion.

And firſt, Many which countenance the opinion in this reaſon, do tacitly and upon conſequence overthrow it in another. For whilſt they make the River *Senaga* to divide and bound the *Moors*, ſo that on the South ſide they are black, on the other only tawny; they imply a ſecret cauſality herein from the air, place or river; and ſeem not to derive it from the Sun. The effects of whoſe activity are not precipitouſly abrupted, but gradually proceed to their ceſſations.

Secondly, If we affirm that this effect proceeded, or as we will not be backward to concede, it may be advanced and fomented from the fervour of the Sun; yet do we not hereby diſcover a principle ſufficient to decide the queſtion concerning other animals; nor doth he that affirmeth the heat makes man black, afford a reaſon why other animals in the ſame habitations maintain a conſtant and agreeable hue unto thoſe in other parts, as Lions, Elephants, Camels, Swans, Tigers, Eſtriges. Which though in *Æthiopia*, in the diſadvantage of two Summers, and perpendicular Rayes of the Sun, do yet make good the complexion of their ſpecies, and hold a colourable correſpondence unto thoſe in milder regions. Now did this complexion proceed from heat in man, the ſame would be communicated unto other animals which equally participate the Influence of the common Agent. For thus it is in the effects of cold, in Regions far removed from the Sun; for therein men are not only of fair complexions, gray-eyed, and of light hair; but many creatures expoſed to the air, deflect in extremity from their natural colours; from brown, ruſſet and black, receiving the complexion of Winter, and turning perfect white. Thus *Olaus Magnus* relates, that after the Autumnal Æquinox, Foxes begin to grow white; thus *Michovius* reporteth, and we want not ocular confirmation, that Hares and Partridges turn white in the Winter; and thus a white Crow, a proverbial rarity with us, is none unto them; but that inſeparable accident of *Porphyrie* is ſeparated in many hundreds.

Thirdly, If the fervour of the Sun, or intemperate heat of clime did ſolely occaſion this complexion, ſurely a migration or change thereof might cauſe a ſenſible, if not a total mutation; which notwithſtanding experience will not admit. For *Negroes* tranſplanted, although into cold and flegmatick habitations, continue their hue both in themſelves, and

alſo

alſo their generations; except they mix with different complexions; whereby notwithſtanding there only ſucceeds a remiſſion of their tinctures; there remaining unto many deſcents a ſtrong ſhadow of their Originals; and if they preſerve their copulations entire, they ſtill maintain their complexions. As is very remarkable in the dominions of the Grand Signior, and moſt obſervable in the *Moors* in *Braſilia*, which tranſplanted about an hundred years paſt, continue the tinctures of their Fathers unto this day. And ſo likewiſe fair or white people tranſlated into hotter Countries receive not impreſſions amounting to this complexion, as hath been obſerved in many *Europeans* who have lived in the land of *Negroes*: and as *Edvardus Lopez* teſtifieth of the *Spaniſh* Plantations, that they retained their native complexions unto his days.

Fourthly, If the fervour of the Sun were the ſole cauſe hereof in *Ethiopia* or any land of *Negroes*; it were alſo reaſonable that Inhabitants of the ſame latitude, ſubjected unto the ſame vicinity of the Sun, the ſame diurnal arch, and direction of its rayes, ſhould alſo partake of the ſame hue and complexion, which notwithſtanding they do not. For the Inhabitants of the ſame latitude in *Aſia* are of a different complexion, as are the Inhabitants of *Cambogia* and *Java*, inſomuch that ſome conceive the *Negro* is properly a native of *Africa*, and that thoſe places in *Aſia* inhabited now by *Moors*, are but the intruſions of *Negroes* arriving firſt from *Africa*, as we generally conceive of *Madagaſcar*, and the adjoyning Iſlands, who retain the ſame complexion unto this day. But this defect is more remarkable in *America*; which although ſubjected unto both the Tropicks, yet are not the Inhabitants black between, or near, or under either: neither to the South-ward in *Braſilia*, *Chili*, or *Peru*; nor yet to the Northward in *Hiſpaniola*, *Caſtilia*, *del Oro*, or *Nicaragua*. And although in many parts thereof there be at preſent ſwarms of *Negroes* ſerving under the *Spaniard*, yet were they all tranſported from *Africa*, ſince the diſcovery of *Columbus*; and are not indigenous or proper Natives of *America*.

Fifthly, We cannot conclude this complexion in Nations from the vicinity or habitude they hold unto the Sun; for even in *Africa* they be *Negroes* under the Southern Tropick, but are not all of this hue either under or near the Northern. So the people of *Gualata*, *Agades*, *Garamantes*, and of *Goaga* all within the Northern Tropicks, , are not *Negroes*; but on the other ſide *Capo Negro*, *Cefala*, and *Madagaſcar*, they are of a jetty black.

Now if to ſalve this Anomaly we ſay, the heat of the Sun is more powerful in the Southern Tropick, becauſe in the ſign of Capricorn falls out the *Perigeum* or loweſt place of the Sun in his Eccentrick, whereby he becomes nearer unto them than unto the other in *Cancer*, we ſhall not abſolve the doubt. And if any inſiſt upon ſuch niceties, and will preſume a different effect of the Sun, from ſuch a difference of place or vicinity; we ſhall balance the ſame with the concernment of its motion, and time of revolution, and ſay he is more powerful in the Northern Hemiſphere, and in the *Apogeum*; for therein his motion is ſlower, and ſo his heat reſpectively unto thoſe habitations, as of duration, ſo alſo of more effect. For, though he abſolve his revolution in 365 days, odd hours and minutes, yet by reaſon of Eccentricity, his motion is unequal, and his courſe far longer in the Northern Semicircle, than in the Southern; for the latter he paſſeth in 178 days, but the other takes him 187, that is, nine days more. So is his preſence more continued unto the Northern Inhabitants; and the longer day in *Cancer* is longer unto us, than that in *Capricorn* unto the Southern Habitator. Beſide, hereby we only infer an inequality of heat in different Tropicks, but not an equality of effects in other parts ſubjected to the ſame. For, in the ſame degree, and as near the Earth he makes his revolution unto the *American*, whoſe Inhabitants, notwithſtanding, partake not of the ſame effect. And if herein we ſeek a relief from the Dog-ſtar, we ſhall introduce an effect proper unto a few,

from a cauſe common unto many; for upon the ſame grounds that Star ſhould have as forcible a power upon *America* and *Aſia*; and although it be not vertical unto any part of *Aſia*, but only paſſeth by *Beach*, *in terra incognita*; yet is it ſo unto *America*, and vertically paſſeth over the habitations of *Peru* and *Braſilia*.

Sixthly, And which is very conſiderable, there are *Negroes* in *Africa* beyond the Southern Tropick, and ſome ſo far removed from it, as Geographically the clime is not intemperate, that is, near the Cape of Good Hope, in 36 of the Southern Latitude. Whereas in the ſame elevation Northward, the Inhabitants of *America* are fair; and they of *Europe* in *Candy*, *Sicily*, and ſome other parts of *Spain*, deſerve not properly ſo low a name as *Tawny*.

Laſtly, Whereas the *Africans* are conceived to be more peculiarly ſcorched and torrified from the Sun, by addition of drineſs from the ſoil, from want and defect of water; it will not excuſe the doubt. For the parts which the *Negroes* poſſeſs, are not ſo void of Rivers and moiſture, as is preſumed; for on the other ſide the mountains of the Moon, in that great tract called, *Zanzibar*, there are the mighty Rivers of *Suama*, and *Spirito Santo*; on this ſide, the great River *Zaire*, the mighty *Nile* and *Niger*; which do not only moiſten, and contemperate the air by their exhalations, but refreſh and humectate the Earth by their annual Inundations. Beſide in that part of *Africa*, which with all diſadvantage is moſt dry, that is, in ſituation between the Tropicks, defect of Rivers and inundations, as alſo abundance of Sands, the people are not eſteemed *Negroes*; and that is *Libya*, which with the *Greeks* carries the name of all *Africa*. A region ſo deſert, dry and ſandy, that Travellers (as *Leo* reports) are fain to carry water on their Camels; whereof they find not a drop ſometime in ſix or ſeven days. Yet is this Country accounted by Geographers no part of *terra Nigritarum*, and *Ptolomy* placeth herein the *Leuco-Aithiopes*, or pale and Tawny *Moors*.

The drineſs of *Libya*.

Now the ground of this opinion might be the viſible quality of Blackneſs obſervably produced by heat, fire, and ſmoak; but eſpecially with the Ancients the violent eſteem they held of the heat of the Sun, in the hot or torrid Zone; conceiving that part unhabitable, and therefore that people in the vicinities, or frontiers thereof, could not eſcape without this change of their complexions. But how far they were miſtaken in this apprehenſion, modern Geography hath diſcovered: And as we have declared, there are many within this Zone whoſe complexions deſcend not ſo low as unto blackneſs. And if we ſhould ſtrictly inſiſt hereon, the poſſibility might fall into queſtion; that is, whether the heat of the Sun, whoſe fervour may ſwart a living part, and even black a dead or diſſolving fleſh; can yet in animals, whoſe parts are ſucceſſive and in continual flux, produce this deep and perfect gloſs of Blackneſs.

The particular cauſes of the *Negroes* blackneſs probably.

Thus having evinced, at leaſt made dubious, the Sun is not the Author of this Blackneſs, how, and when this tincture firſt began is yet a Riddle, and poſitively to determine, it ſurpaſſeth my preſumption. Seeing therefore we cannot diſcover what did effect it, it may afford ſome piece of ſatisfaction to know what might procure it. It may be therefore conſidered, whether the inward uſe of certain waters or fountains of peculiar operations, might not at firſt produce the effect in queſtion. For, of the like we have records in *Ariſtotle*, *Strabo*, and *Pliny*, who hath made a collection hereof, as of two fountains in *Bœotia*, the one making Sheep white, the other black; of the water of *Siberis* which made Oxen black, and the like effect it had alſo upon Men, dying not only the skin, but making their hairs black and curled. This was the conceit of *Ariſtobulus*; who received ſo little ſatisfaction from the other, or that it might be cauſed by heat, or any kind of fire, that he conceived it as reaſonable to impute the effect unto water.

Secondly, It may be perpended whether it might not fall out the ſame way that *Jacob*'s cattle became ſpeckled, ſpotted and ring-ſtraked, that

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is, by the Power and Efficacy of Imagination; which produceth effects in the conception correſpondent unto the phancy of the Agents in generation; and ſometimes aſſimilates the Idea of the Generator into a reality in the thing ingendred. For, hereof there paſs for current many indiſputed examples; ſo in *Hippocrates* we read of one, that from an intent view of a Picture conceived a *Negro*; And in the Hiſtory of *Heliodore*, of a Mooriſh Queen, who upon aſpection of the Picture of *Andromeda*, conceived and brought forth a fair one, And thus perhaps might ſome ſay was the beginning of this complexion, induced firſt by Imagination, which having once impregnated the ſeed, found afterward concurrent co-operations, which were continued by Climes, whoſe conſtitution advantaged the firſt impreſſion. Thus *Plotinus* conceiveth white Peacocks firſt came in. Thus many opinion that from aſpection of the Snow, which lieth long in Northern Regions, and high mountains, Hawks, Kites, Bears, and other creatures become white; and by this way *Auſtin* conceiveth the Devil provided, they never wanted a white-ſpotted Ox in *Egypt*; for ſuch an one they worſhipped, and called *Apis*.

Vide plura apud Tho. Fienum, *de viribus imaginationis.*

Why Bears, *&c.* white in ſome places.

Thirdly, It is not indiſputable whether it might not proceed from ſuch a cauſe and the like foundation of Tincture, as doth the black Jaundiſe, which meeting with congenerous cauſes might ſettle durable inclinations, and advance their generations unto that hue, which were naturally before but a degree or two below it. And this tranſmiſſion we ſhall the eaſier admit in colour, if we remember the like hath been effected in organical parts and figures; the Symmetry whereof being caſually or purpoſely perverted, their morboſities have vigorouſly deſcended to their poſterities, and that in durable deformities. This was the beginning of *Macrocephali*, or people with long heads, whereof *Hippocrates* hath clearly delivered himſelf: *Cùm primum editus eſt Infans, caput ejus tenellum manibus effingunt, & in longitudine adoleſcere cogunt; hoc inſtitutum primum hujuſmodi, naturæ dedit vitium, ſucceſſu verò temporis in naturam abiit, ut proinde inſtituto nihil amplius opus eſſet; ſemen enim genitale ex omnibus corporis partibus provenit, ex ſanis quidem ſanum, ex morboſis morboſum. Si igitur ex calvis calvi, ex caſtis caſti, & ex diſtortis, ut plurimum, diſtorti gignuntur, eademque in cæteris formis valet ratio; quid prohibet cur non ex macrocephalis macrocephali gignantur?* Thus as *Ariſtotle* obſerveth, the Deers of *Arginuſa* had their ears divided; occaſioned at firſt by ſlitting the Ears of Deer. Thus have the *Chineſes* little feet, moſt *Negroes* great lips and flat Noſes; And thus many *Spaniards*, and *Mediterranean* Inhabitants, which are of the Race of *Barbary Moors* (although after frequent commixture) have not worn out the † *Camoys* Noſe unto this day.

De Aire, Aquis, & Locis.

† Flat Noſe.

Artificial *Negroes*, or *Gypſies*, acquire their complexion by anointing their bodies with Bacon and fat ſubſtances, and ſo expoſing them to the Sun. In *Guiney Moors* and others, it hath been obſerved, that they frequently moiſten their skins with fat and oyly materials, to temper the irkſom drineſs thereof from the parching rayes of the Sun. Whether this practice at firſt had not ſome efficacy toward this complexion, may alſo be conſidered.

Laſtly, If we ſtill be urged to particularities, and ſuch as declare how, and when the ſeed of *Adam* did firſt receive this tincture; we may ſay that Men became black in the ſame manner that ſome Foxes, Squirrels, Lions, firſt turned of this complexion, whereof there are a conſtant ſort in divers Countries; that ſome Choughs came to have red Legs and Bills, that Crows became pyed: All which mutations however they began, depend on durable foundations; and ſuch as may continue for ever. And if as yet we muſt farther define the cauſe and manner of this mutation, we muſt confeſs, in matters of Antiquity, and ſuch as are decided by Hiſtory, if their Originals and firſt beginnings eſcape a due relation, they fall into great obſcurities, and ſuch as future Ages ſeldom reduce unto a reſolution. Thus if you deduct the adminiſtration of Angels, and that they diſperſed the creatures into all parts after the flood, as they had

How ſundry kinds of Animals come to be found in Iſlands.

had congregated them into *Noah*'s Ark before; it will be no eaſie queſtion to reſolve, how ſeveral ſorts of animals were firſt diſperſed into Iſlands, and almoſt how any into *America*. How the venereal Contagion began in that part of the Earth, ſince Hiſtory is ſilent, is not eaſily reſolved by Philoſophy. For whereas it is imputed unto Anthropophagy, or the eating of mans fleſh; that cauſe hath been common unto many other Countries, and there have been Cannibals or Men-eaters in the three other parts of the World, if we credit the relations of *Ptolomy*, *Strabo* and *Pliny*. And thus if the favourable pen of *Moſes* had not revealed the confuſion of tongues, and poſitively declared their diviſion at *Babel*; our diſputes concerning their beginning had been without end; and I fear we muſt have left the hopes of that deciſion unto *Elias*.

Elias convenerit, ſolvet dubium.

And if any will yet inſiſt, and urge the queſtion farther ſtill upon me, I ſhall be enforced unto divers of the like nature, wherein perhaps I ſhall receive no greater ſatisfaction. I ſhall demand how the Camels of *Bactria* came to have two bunches on their backs, whereas the Camels of *Arabia* in all relations have but one? How Oxen in ſome Countries began and continue gibbous or bunch-back'd? what way thoſe many different ſhapes, colours, hairs, and natures of Dogs came in? how they of ſome Countries became depilous, and without any hair at all, whereas ſome ſorts in exceſs abound therewith? How the Indian Hare came to have a long tail, whereas that part in others attains no higher than a ſcut? How the Hogs of *Illyria*, which *Ariſtotle* ſpeaks of, became *ſolipedes* or whole-hooſed, whereas in other parts they are biſulcous, and deſcribed cloven-hooſed by God himſelf? All which with many others muſt needs ſeem ſtrange unto thoſe that hold there were but two of the unclean ſort in the Ark; and are forced to reduce theſe varieties to unknown originals.

How the complexion of the Negroes may be propagated.

However therefore this complexion was firſt acquired, it is evidently maintained by generation, and by the tincture of the skin as a ſpermatical part traduced from Father unto Son; ſo that they which are ſtrangers contract it not, and the Natives which tranſmigrate, omit it not without commixture, and that after divers generations. And this affection, (if the ſtory were true) might wonderfully be confirmed, by what *Maginus* and others relate of the Emperour of *Æthiopia*, or *Preſter John*, who derived from *Solomon*, is not yet deſcended into the hew of his Country, but remains a *Mulatto*, that is, of a Mongril complexion unto this day. Now although we conceive this blackneſs to be ſeminal, yet are we not of *Herodotus* conceit, that their ſeed is black. An opinion long ago rejected by *Ariſtotle*, and ſince by ſenſe and enquiry. His aſſertion againſt the Hiſtorian was probable, that all ſeed was white; that is without great controverſie in viviparous Animals, and ſuch as have Teſticles, or preparing veſſels, wherein it receives a manifeſt dealbation. And not only in them, but (for ought I know) in Fiſhes, not abating the ſeed of Plants; whereof at leaſt in moſt, though the skin and covering be black, yet is the ſeed and fructifying part not ſo: as may be obſerved in the ſeeds of *Onyons*, *Pyonie* and *Baſil*. Moſt controvertible it ſeems in the ſpawn of Frogs, and Lobſters, whereof notwithſtanding at the very firſt the ſpawn is white, contracting by degrees a blackneſs, anſwerable in the one unto the colour of the ſhell, in the other unto the Porwigle or Tadpole; that is, that Animal which firſt proceedeth from it. And thus may it alſo be in the generation and ſperm of Negroes; that being firſt and in its naturals white, but upon ſeparation of parts, accidents before inviſible become apparent; there ariſing a ſhadow or dark effloreſcence in the out-ſide; whereby not only their legitimate and timely births, but their abortions are alſo dusky, before they have felt the ſcorch and fervor of the Sun.

CHAP.

CHAP. XI.

Of the same.

A Second opinion there is, that this complexion was first a curse of God derived unto them from *Cham*, upon whom it was inflicted for discovering the nakedness of *Noah*. Which notwithstanding is sooner affirmed than proved, and carrieth with it sundry improbabilities. For first, if we derive the curse on *Cham*, or in general upon his posterity, we shall denigrate a greater part of the Earth than was ever so conceived; and not only paint the Æthiopians and reputed Sons of *Cush*, but the people also of *Egypt*, *Arabia*, *Assyria* and *Chaldea*; for by this race were these Countries also peopled. And if concordantly unto *Berosus*, the fragment of *Cato de Originibus*, some things of *Halicarnassens*, *Macrobius*, and out of them of *Leandro* and *Annius*, we shall conceive of the travels of *Camese* or *Cham*; we may introduce a generation of *Negroes* as high as *Italy*; which part was never culpable of deformity, but hath produced the magnified examples of beauty.

Secondly, The curse mentioned in Scripture was not denounced upon *Cham*, but *Canaan* his youngest Son, and the reasons thereof are divers. The first, from the Jewish Tradition, whereby it is conceived, that *Canaan* made the discovery of the nakedness of *Noah*, and notified it unto *Cham*. Secondly, to have cursed *Cham*, had been to curse all his posterity, whereof but one was guilty of the fact. And lastly, he spared *Cham*, because he had blessed him before. Now if we confine this curse unto *Canaan*, and think the same fulfilled in his posterity; then do we induce this complexion on the Sidonians, then was the promised land a tract of Negroes; For from *Canaan* were descended the *Canaanites*, *Jebusites*, *Amorites*, *Gergazites* and *Hivites*, which were possessed of that land. *Cap. 9.*

Thirdly, Although we should place the original of this curse upon one of the Sons of *Cham*, yet were it not known from which of them to derive it. For the particularity of their descents is imperfectly set down by accountants, nor is it distinctly determinable from whom thereof the *Æthiopians* are proceeded. For whereas these of *Africa* are generally esteemed to be the Issue of *Chus*, the elder Son of *Cham*, it is not so easily made out. For the land of *Chus*, which the Septuagint translates *Æthiopia*, makes no part of *Africa*, nor is it the habitation of Blackmores, but the Country of *Arabia*, especially the Happy and Stony possessions and Colonies of all the Sons of *Chus*, excepting *Nimrod*, and *Havilah*: possessed and planted wholly by the Children of *Chus*, that is, by *Sabtah* and *Raamah*, *Sabtacha*, and the Sons of *Raamah*, *Dedan*, and *Sheba*, according unto whose names the Nations of those parts have received their denominations, as may be collected from *Pliny* and *Ptolemy*; and as we are informed by credible Authors, they hold a fair Analogy in their names even unto our days. So the Wife of *Moses* translated in Scripture an *Æthiopian*, and so confirmed by the fabulous relation of *Josephus*, was none of the Daughters of *Africa*, nor any Negroe of *Æthiopia*, but the Daughter of *Jethro*, Prince and Priest of *Madian*, which was a part of *Arabia*, the Stony, bordering upon the Red Sea. So the Queen of *Sheba* came not unto *Solomon* out of *Æthiopia*, but from *Arabia*, and that part thereof which bore the name of the first Planter, the Son of *Chus*. So whether the Eunuch which *Philip* the Deacon baptised, were servant unto *Candace* Queen of the *African Æthiopia* (although *Damianus à Goes*, *Codignus*, and the Æthiopick relations averr) is yet by many, and with strong suspicions doubted. So that Army of a million, which *Zerah* King of *Æthiopia* is said to bring against *Asa*, was drawn out of *Arabia*, and the plantations of *Chus*; not out of *Æthiopia*, and the remote habitations

tations of the Moors. For it is ſaid that *Aſa* purſuing his victory, took from him the City *Gerar*; now *Gerar* was no City in or near *Æthiopia*, but a place between *Cadeſh* and *Zur*; where *Abraham* formerly ſojourned. Since thereof theſe *African Æthiopians* are not convinced by the common acception to be the Sons of *Chus*, whether they be not the poſterity of *Phut* or *Mizraim*, or both, it is not aſſuredly determined. For *Mizraim*, he poſſeſſed *Egypt*, and the Eaſt parts of *Africa*. From *Lubym* his Son came the *Libyans*, and perhaps from them the *Ethiopians*. *Phut* poſſeſſed *Mauritania*, and the Weſtern parts of *Africa*, and from theſe perhaps deſcended the Moors of the Weſt, of *Mandinga*, *Meleguette* and *Guinie*. But from *Canaan*, upon whom the curſe was pronounced, none of theſe had their originall; for he was reſtrained unto *Canaan* and *Syria*; although in after Ages many Colonies diſperſed, and ſome thereof upon the coaſts of *Africa*, and poſſeſſions of his elder brothers.

Fourthly, To take away all doubt or any probable divarication, the curſe is plainly ſpecified in the Text, nor need we diſpute it, like the mark of *Cain*; *Servus ſervorum erit fratribus ſuis*, *Curſed be Canaan, a ſervant of ſervants ſhall he be unto his Brethren*; which was after fulfilled in the conqueſt of *Canaan*, ſubdued by the *Iſraelites*, the poſterity of *Sem*. Which Prophecy *Abraham* well underſtanding, took an oath of his Servant not to take a Wife for his Son *Iſaac* out of the Daughters of the *Canaanites*; and the like was performed by *Iſaac* in the behalf of his Son *Jacob*. As for *Cham* and his other Sons, this curſe attained them not; for *Nimrod* the Son of *Chus* ſet up his kingdom in *Babylon*, and erected the firſt great Empire; *Mizraim* and his poſterity grew mighty Monarchs in *Egypt*; and the Empire, of the *Ethiopians* hath been as large as either. Nor did the curſe deſcend in generall upon the poſterity of *Canaan*: for the *Sidonians*, *Arkites*, *Hamathites*, *Sinites*, *Arvadites*, and *Zemerites* ſeem exempted. But why there being eleven Sons, five only were condemned and ſix eſcaped the malediction, is a ſecret beyond diſcovery.

Laſtly, Whereas Men affirm this colour was a Curſe, I cannot make out the propriety of that name, it neither ſeeming ſo to them, nor reaſonably unto us; for they take ſo much content therein, that they eſteem deformity by other colours, deſcribing the Devil, and terrible objects, white. And if we ſeriouſly conſult the definitions of beauty, and exactly perpend what wiſe men determine thereof, we ſhall not apprehend a curſe, or any deformity therein. For firſt, ſome place the eſſence thereof in the proportion of parts, conceiving it to conſiſt in a comely commenſurability of the whole unto the parts, and the parts between themſelves: which is the determination of the beſt and learned Writers. Now hereby the Moors are not excluded from beauty: there being in this deſcription no conſideration of colours, but an apt connexion and frame of parts and the whole. Others there be, and thoſe moſt in number, which place it not only in proportion of parts, but alſo in grace of colour. But to make Colour eſſential unto Beauty, there will ariſe no ſlender difficulty: For *Ariſtotle* in two definitions of pulchritude, and *Galen* in one, have made no mention of colour. Neither will it agree unto the Beauty of Animals: wherein notwithſtanding there is an approved pulchritude. Thus Horſes are handſome under any colour, and the ſymmetry of parts obſcures the conſideration of complexions. Thus in concolour animals and ſuch as are confined unto one colour, we meaſure not their Beauty thereby: for if a Crow or Black-bird grow white, we generally account it more pretty; And in almoſt a monſtroſity deſcend not to opinion of deformity. By this way likewiſe the Moors eſcape the curſe of deformity; their concurring no ſtationary colour, and ſometimes not any unto Beauty.

The Platonick contemplators reject both theſe deſcriptions founded upon parts and colours, or either: as M. *Leo* the Jew hath excellently diſcourſed in his Genealogy of Love, defining beauty a formal grace, which delights and moves them to love which comprehend it. This grace, ſay they, diſcoverable outwardly, is the reſplendor and ray of ſome interiour and

inviſible

inviſible Beauty, and proceedeth from the forms of compoſitions amiable. Whoſe faculties if they can aptly contrive their matter, they beget in the ſubject an agreeable and pleaſing beauty; if over-ruled thereby, they evidence not their perfections, but run into deformity. For ſeeing that out of the ſame materials, *Therſites* and *Paris*, Beauty and monſtroſity may be contrived; the forms and operative faculties introduce and determine their perfections. Which in natural bodies, receive exactneſs in every kind, according to the firſt *Idea* of the Creator, and in contrived bodies the phancy of the Artificer. And by this conſideration of Beauty, the Moors alſo are not excluded, but hold a common ſhare therein with all mankind.

Laſtly, In whatſoever its *Theory* conſiſteth, or if in the general, we allow the common conceit of Symmetry and of colour, yet to deſcend unto ſingularities, or determine in what ſymmetry or colour it conſiſted, were a ſlippery deſignation. For Beauty is determined by opinion, and ſeems to have no eſſence that holds one notion with all; that ſeeming beauteous unto one, which hath no favour with another; and that unto every one, according as cuſtome hath made it natural, or ſympathy and conformity of minds ſhall make it ſeem agreeable. Thus flat Noſes ſeem comely unto the Moor, an Aquiline or hawked one unto the *Perſian*, a large and prominent Noſe unto the Roman; but none of all theſe are acceptable in our opinion. Thus ſome think it moſt ornamental to wear their Bracelets on their Wreſts, others ſay it is better to have them about their Ankles; ſome think it moſt comely to wear their Rings and Jewels in the Ear, others will have them about their Privities; a third will not think they are compleat except they hang them in their Lips, Cheeks, or Noſes. Thus *Homer* to ſet off *Minerva*, calleth her γλαυκῶπις, that is, gray or light-blue eyed; now this unto us ſeems far leſs amiable than the black. Thus we that are of contrary complexions accuſe the blackneſs of the Moors as ugly. But the Spouſe in the *Canticles* excuſeth this conceit, in that deſcription of hers, *I am black, but comely.* And howſoever *Cerberus*, and the furies of Hell be deſcribed by the Poets under this complexion, yet in the beauty of our Saviour, blackneſs is commended, when it is ſaid, *his locks are buſhie and black as a Raven.* So that to inferr this as a curſe, or to reaſon it as a deformity, is no way reaſonable; the two foundations of Beauty, Symmetry and complexion, receiving ſuch various apprehenſions, that no deviation will be expounded ſo high as a curſe or undeniable deformity, without a manifeſt and confeſſed degree of monſtroſity.

Laſtly, It is a very injurious method unto Philoſophy, and a perpetual promotion of ignorance, in points of obſcurity; nor open unto eaſie conſiderations, to fall upon a preſent refuge unto Miracles; or recurr unto immediate contrivance, from the unſearchable Hands of God. Thus in the conceit of the evil odor of the Jews, Chriſtians without a farther reſearch into the verity of the thing, or inquiry into the cauſe, draw up a judgement upon them from the Paſſion of their Saviour. Thus in the wondrous effects of the clime of *Ireland*, and the freedom from all venemous creatures, the credulity of common conceit imputes this immunity unto the benediction of S. *Patrick*, as *Beda* and *Gyraldus* have left recorded. Thus the Aſs having a peculiar mark of a croſs made by a black liſt down his back, and another athwart, or at right angles down his ſhoulders; common opinion aſcribes this figure unto a peculiar ſignation, ſince that beaſt had the honour to bear our Saviour on his back. Certainly this is a courſe more deſperate than Antipathies, Sympathies, or occult Qualities; wherein by a final and ſatisfactive diſcernment of faith, we lay the laſt and particular effects upon the firſt and general cauſe of all things; whereas in the other, we do but palliate our determinations, until our advanced endeavours do totally reject, or partially ſalve their evaſions.

CHAP.

CHAP. XII.

A Digreſſion concerning blackneſs.

THere being therefore two opinions repugnant unto each other, it may not be preſumptive or ſceptical to doubt of both. And becauſe we remain imperfect in the general Theory of Colours, we ſhall deliver at preſent a ſhort diſcovery of Blackneſs; wherein although perhaps we afford no greater ſatisfaction than others, yet ſhall we Empirically and ſenſibly diſcourſe hereof; deducing the cauſes of Blackneſs from ſuch Originals in nature, as we do generally obſerve things are denigrated by Art. And herein I hope our progreſſion will not be thought unreaſonable, for Art being the imitation of Nature, or Nature at the ſecond Hand; it is but a ſenſible expreſſion of effects dependent on the ſame, though more removed cauſes: and therefore the works of the one may ſerve to diſcover the other. And though colours of bodies may ariſe according to the receptions, refraction, or modification of Light; yet are there certain materials which may diſpoſe them unto ſuch qualities.

And firſt, Things become black by a ſooty and fuliginous matter proceeding from the Sulphur of bodies torrified; not taking *fuligo* ſtrictly, but in oppoſition unto ἀτμὶς, that is any kind of vaporous or madefying excretion; and comprehending ἀναθυμίασις, that is, as *Ariſtotle* defines it, a ſeparation of moiſt and dry parts made by the action of heat or fire, and colouring bodies objected. Hereof in his Meteors, from the qualities of the ſubject, he raiſeth three kinds; the exhalations from ligneous and lean bodies, as bones, hair, and the like he called καπνὸς, *fumus*; from fat bodies, and ſuch as have not their fatneſs conſpicuous or ſeparated he termeth λίγνις *fuligo*, as Wax, Roſin, Pitch, or Turpentine; that from unctuous Bodies, and ſuch whoſe oylineſs is evident, he named χυλὸς or *nidor*. Now every one of theſe do blacken Bodies objected unto them, and are to be conceived in the ſooty and fuliginous matter expreſſed.

I ſay, proceeding from the Sulphur of Bodies torrified, that is, the oyl, fat, and unctuous parts wherein conſiſt the principles of flammability. Not pure and refined Sulphur, as in the Spirits of wine often rectified; but containing terreſtrious parts, and carrying with it the volatile ſalt of the body, and ſuch as is diſtinguiſhable by taſte in Soot; nor vulgar and uſual Sulphur, for that leaves none or very little blackneſs, except a metalline Body receive the exhalation.

I ſay, torrified, ſindged, or ſuffering ſome impreſſion from fire; thus are Bodies caſually or artificially denigrated, which in their naturals are of another complexion; thus are Charcoals made black by an infection of their own *ſuffitus*; ſo is it true what is affirmed of combuſtible Bodies. *Aduſta nigra, peruſta alba*; black at firſt from the fuliginous tincture, which being exhaled they become white, as is perceptible in aſhes. And ſo doth Fire cleanſe and purifie Bodies, becauſe it conſumes the Sulphureous parts, which before did make them foul: and therefore refines thoſe Bodies which will never be mundified by water. Thus Camphire, of a white ſubſtance, by its *fuligo* affordeth a deep black. So is Pitch black, although it proceed from the ſame tree with Roſin, the one diſtilling forth, the other forced by Fire. So of the *ſuffitus* of a Torch, do Painters make a velvet black: ſo is lamp black made: ſo of burnt Hart-horns a ſable; ſo is Bacon denigrated in Chimnies: ſo in Fevers and hot diſtempers from choler aduſt is cauſed a blackneſs in our tongues, teeth and excretions: ſo are *uſtilago*, brant-corn and Trees black by blaſting; ſo parts cauterized, gangrenated, ſiderated and mortified, become black, the radical moiſture, or vital Sulphur ſuffering an extinction, and ſmothered in the part effected.

So

So not only actual but potential fire; not burning fire, but alſo corroding water will induce a blackneſs. So are Chimnies and Furnaces generally black, except they receive a clear and manifeſt Sulphur: for the ſmoak of Sulphur will not black a paper, and is commonly uſed by women to whiten Tiffanies, which it performeth by an acid vitriolous, and penetrating ſpirit aſcending from it, by reaſon whereof it is not apt to kindle any thing; nor will it eaſily light a Candle, untill that ſpirit be ſpent, and the flame approacheth the match, This is that acid and piercing ſpirit which with ſuch activity and compunction invadeth the brains and noſtrils of thoſe that receive it. And thus when *Bellonius* affirmeth the Charcoals made out of the wood of Oxycedar are white, Dr. *Jordan* in his judicious Diſcourſe of mineral waters yieldeth the reaſon, becauſe their vapors are rather ſulphureous than of any other combuſtible ſubſtance. So we ſee that *Tinby* coals will not black linnen being hanged in the ſmoak thereof, but rather whiten it, by reaſon of the drying and penetrating quality of Sulphur, which will make red Roſes white. And therefore to conceive a general blackneſs in Hell, and yet therein the pure and refined flames of ſulphur, is no Philoſophical conception, nor will it well conſiſt with the real effects of its nature.

Why the ſmoak of pure Sulphur blacks not.

Theſe are the advenient and artificial wayes of denigration, anſwerably whereto may be the natural progreſs. Theſe are the wayes whereby culinary and common fires do operate, and correſpondent hereunto may be the effects of fire elemental. So may Bitumen, Coals, Jet, Black-lead, and divers mineral earths become black; being either fuliginous concretions in the earth, or ſuffering a ſcorch from denigrating Principles in their formation. So men and other animals receive different tinctures from conſtitution and complexional effloreſcences, and deſcend ſtill lower, as they partake of the fuliginous and denigrating humour. And ſo may the *Æthiopians* or *Negroes* become coal-black, from fuliginous effloreſcences and complexional tinctures ariſing from ſuch probabilities, as we have declared before.

The ſecond way whereby bodies become black, is an Atramentous condition or mixture, that is, a vitriolate or copperoſe quality conjoyning with a terreſtrious and aſtringent humidity; for ſo is *Atramentum ſcriptorium*, or writing Ink commonly made by Copperoſe caſt upon a decoction or infuſion of Galls. I ſay a Vitriolous or copperate quality; for Vitriol is the active or chief ingredient in Ink, and no other ſalt that I know will ſtrike the colour with Galls; neither Alom, Sal-gem, Nitre, nor Armoniack. Now artificial Copperoſe, and ſuch as we commonly uſe, is a rough and acrimonious kind of ſalt drawn out of ferreous and eruginous earths, partaking chiefly of Iron and Copper; the blue of Copper, the green moſt of Iron: Nor is it unuſual to diſſolve fragments of Iron in the liquor thereof, for advantage in the concretion. I ſay, a terreſtrious or aſtringent humidity; for without this there will enſue no tincture; for Copperoſe in a decoction of Lettuce or Mallows affords no black, which with an aſtringent mixture it will do, though it be made up with oyl, as in printing and painting Ink. But whereas in this compoſition we uſe only Nut-galls, that is, an excreſcence from the Oak, therein we follow and beat upon the old receipt; for any plant of auſtere and ſtiptick parts will ſuffice, as I have experimented in *Biſtort*, *Myrobalans*, *Myrtus Brabantica*, *Balauſtium* and Red-Roſes. And indeed, moſt decoctions of aſtringent Plants, of what colour ſoever, do leave in the Liquor a deep and Muſcadine red: which by addition of Vitriol deſcends into a black: and ſo *Dioſcorides* in his receipt of Ink, leaves out Gall, and with Copperoſe makes uſe of Soot.

What the common Copperoſe is.

Now if we enquire in what part of Vitriol this Atramental and denigrating condition lodgeth, it will ſeem eſpecially to lie in the more fixed ſalt thereof; For the phlegm or aqueous evaporation will not denigrate; nor yet ſpirits of Vitriol, which carry with them volatile and nimbler Salt: For if upon a decoction of Copperoſe and Gall, be poured the ſpirits or oyl of Vitriol, the liquor will relinquiſh his blackneſs; the Gall and parts of the Copperoſe precipitate unto the bottom, and the Ink grow clear again, which it will not ſo eaſily do in common Ink, becauſe that gum is diſſolved therein, which

hindereth the ſeparation. But Colcothar or Vitriol burnt, though unto a redneſs, containing the fixed ſalt, will make good Ink; and ſo will the *Lixivium*, or Lye made thereof with warm water; but the *Terra* or inſipid earth remaining, affords no black at all, but ſerves in many things for a groſs and uſeful red. And though Spirits of Vitriol, projected upon a decoction of Galls, will not raiſe a black; yet if theſe ſpirits be any way fixed, or return into Vitriol again, the ſame will act their former parts, and denigrate as before.

And if we yet make a more exact enquiry, by what this ſalt of Vitriol more peculiarly gives this colour, we ſhall find it to be from a metalline condition, and eſpecially an Iron Property or ferreous participation. For blue Copperoſe which deeply partakes of the Copper will do it but weakly, Verdegriſe which is made of Copper will not do it at all; But the filings of Iron infuſed in Vinegar, will with a decoction of Galls make good Ink, without any Copperoſe at all; and ſo will infuſion of Load-ſtone, which is of affinity with Iron. And though more conſpicuouſly in Iron, yet ſuch a Calcanthous or Atramentous quality we will not wholly reject in other metals; whereby we often obſerve black tinctures in their ſolutions. Thus a Lemmon, Quince or ſharp Apple cut with a knife becomes immediately black: And from the like cauſe, Artichokes; ſo Sublimate beat up with whites of Eggs, if touched with a knife, becomes incontinently black. So *Aqua fortis*, whoſe ingredient is Vitriol, will make white bodies black. So Leather dreſſed with the bark of Oak, is eaſily made black by a bare ſolution of Copperoſe. So divers Mineral waters and ſuch as participate of Iron, upon an infuſion of Galls, become of a dark colour, and entering upon black. So Steel infuſed, makes not only the liquor duskie, but in bodies wherein it concurs with proportionable tinctures makes alſo the excretions black. And ſo alſo from this vitriolous quality *Mercurius dulcis*, and Vitriol vomitive occaſion black ejections. But whether this denigrating quality in Copperoſe proceedeth from an Iron participation, or rather in Iron from a vitriolous communication; or whether black tinctures from metallical bodies be not from vitriolous parts contained in the Sulphur, ſince common Sulphur containeth alſo much Vitriol, may admit conſideration. However in this way of tincture, it ſeemeth plain, that Iron and Vitriol are the powerful Denigrators.

Such a condition there is naturally in ſome living creatures. Thus that black humour by *Ariſtotle* named θολὸς, and commonly tranſlated *Atramentum*, may be occaſioned in the Cuttle-fiſh. Such a condition there is naturally in ſome Plants, as Black-berries, Walnut-rinds, Black-cherries; whereby they extinguiſh inflammations, corroborate the ſtomach, and are eſteemed ſpecifical in the Epilepſie. Such an atramentous condition there is to be found ſometime in the blood, when that which ſome call *Acetum*, others *Vitriolum*, concurs with parts prepared for this tincture. And ſo from theſe conditions the Moors might poſſibly become Negroes, receiving Atramentous impreſſions in ſome of thoſe wayes, whoſe poſſibility is by us declared.

How a vitriolous quality may be in living bodies.

Nor is it ſtrange that we affirm there are vitriolous parts, qualities, and even at ſome diſtance Vitriol it ſelf in living bodies; for there is a ſowre ſtiptick Salt diffuſed through the Earth, which paſſing a concoction in Plants, becometh milder and more agreeable unto the ſenſe, and this is that vegetable Vitriol, whereby divers Plants contain a grateful ſharpneſs, as Lemmons, Pomegranats, Cherries, or an auſtere and inconcocted roughneſs, as Sloes, Medlars and Quinces. And that not only Vitriol is a cauſe of blackneſs, but that the Salts of natural bodies do carry a powerful ſtroke in the tincture and verniſh of all things, we ſhall not deny, if we contradict not experience, and the viſible art of Dyers; who advance and graduate their colours with Salts. For the decoctions of Simples which bear the viſible colours of bodies decocted, are dead and evanid, without the commixtion of Alum, Argol, and the like. And this is alſo apparent in Chymical preparations. So Cinnabar becomes red by the acid exhalation of Sulphur, which otherwiſe preſents a pure and nivious white. So ſpirits of Salt upon a blue paper make an orient Red. So Tartar or Vitriol upon an infuſion of Violets affords a delightful Crimſon. Thus it is wonderful what

what variety of colours the ſpirits of Saltpeter, and eſpecially, if they be kept in a glaſs while they pierce the ſides thereof; I ſay, what Orient greens they will project: from the like ſpirits in the earth the plants thereof perhaps acquire their verdure. And from ſuch ſolary irradiations may thoſe wondrous varieties ariſe, which are obſervable in Animals, as Mallards heads, and Peacocks feathers, receiving intention or alteration according as they are preſented unto the light. Thus Saltpeter, Ammoniack and Mineral ſpirits emit delectable and various colours; and common *Aqua fortis* will in ſome green and narrow-mouthed glaſſes, about the verges thereof, ſend forth a deep and *Gentianella* blue.

Whence the colours of Plants, &c. may ariſe.

Thus have we at laſt drawn our conjectures unto a period; wherein if our contemplations afford no ſatisfaction unto others, I hope our attempts will bring no condemnation on our ſelves (for beſides that adventures in knowledge are laudable, and the eſſays of weaker heads afford oftentimes improveable hints unto better) although in this long journey we miſs the intended end; yet are there many things of truth diſcloſed by the way; and the collateral verity may unto reaſonable ſpeculations ſomewhat requite the capital indiſcovery.

CHAP. XIII.

Of Gypſies.

GReat wonder it is not we are to ſeek in the original of *Æthiopians*, and natural Negroes, being alſo at a loſs concerning the Original of Gypſies and counterfeit Moors, obſervable in many parts of *Europe*, *Aſia*, and *Africa*.

Common opinion deriveth them from *Egypt*, and from thence they derive themſelves, according to their own account hereof, as *Munſter* diſcovered in the Letters and Paſs which they obtained from *Sigiſmund* the Emperour; that they firſt came out of leſſer *Egypt*, that having defected from the Chriſtian rule, and relapſed unto Pagan Rites, ſome of every family were enjoyned this penance to wander about the world; or as *Aventinus* delivereth, they pretend for this vagabond courſe, a judgement of God upon their forefathers, who refuſed to entertain the Virgin *Mary* and Jeſus, when ſhe fled into their Country.

Opinions concerning the original of Gypſies.

Which account notwithſtanding is of little probability: for the general ſtream of Writers, who enquire into their original, inſiſt not upon this; and are ſo little ſatisfied in their deſcent from *Egypt*, that they deduce them from ſeveral other nations: *Polydore Virgil* accounting them originally *Syrians*, *Philippus Bergomas* fetcheth them from *Chaldea*, *Æneas Sylvius* from ſome part of *Tartary*, *Bellonius* no further than *Walachia* and *Bulgaria*, nor *Aventinus* than the Confines of *Hungaria*.

Feynand. de Cordua didaſcal. multipl.

That they are no *Egyptians*, *Bellonius* maketh evident: who met great droves of Gypſies in *Egypt*, about *Grand Cairo*, *Materea*, and the villages on the banks of *Nilus*, who notwithſtanding were accounted ſtrangers unto that Nation, and wanderers from foreign parts, even as they are eſteemed with us.

Obſervat. l. 2.

That they came not out of *Egypt* is alſo probable, becauſe their firſt appearance was in *Germany*, ſince the year 1400. nor were they obſerved before in other parts of *Europe*, as is deducible from *Munſter*, *Genebrard*, *Crantſius* and *Ortilius*.

Gypſies firſt known in *Germany*.

But that they firſt ſet out not far from *Germany*, is alſo probable from their language, which was the Sclavonian tongue; and when they wandred afterward into *France*, they were commonly called *Bohemians*, which

name is ſtill retained for Gypſies. And therefore when *Cramſius* delivereth, they firſt appeared about the Baltick Sea, when *Bellonius* deriveth them from *Bulgaria* and *Walachia*, and others from about *Hungaria*, they ſpeak not repugnantly hereto: for the language of thoſe Nations was Sclavonian, at leaſt ſome dialect thereof.

But of what nation ſoever they were at firſt, they are now almoſt of all; aſſociating unto them ſome of every Country where they wander: when they will be loſt, or whether at all again, is not without ſome doubt: for unſetled nations have out-laſted others of fixed habitations: and though Gypſies have been baniſhed by moſt Chriſtian Princes, yet have they found ſome countenance from the great Turk, who ſuffereth them to live and maintain publick Stews near the Imperial City in *Pera*, of whom he often maketh a politick advantage, imploying them as ſpies into other Nations, under which title they were baniſhed by *Charles* the fifth.

Bellon. obſervat. l. 2. What uſe the Grand Signior maketh of Gypſies.

CHAP. XIV.

Of ſome others.

WE commonly accuſe the phancies of elder times in the improper figures of heaven aſſigned unto Conſtellations, which do not ſeem to anſwer them, either in Greek or Barbarick Spheres: yet equal incongruities have been commonly committed by Geographers and Hiſtorians, in the figural reſemblances of ſeveral regions on earth; While by *Livy* and *Julius Ruſticus* the Iſland of *Britain* is made to reſemble a long diſh or two-edged ax; *Italy* by *Numatianus* to be like an Oak-leaf: and *Spain* an Ox-hide; while the phancy of *Strabo* makes the habitated earth like a Cloak, and *Dionyſius Afer* will have it like a ſling: with many others obſervable in good writers, yet not made out from the letter or ſignification; acquitting Aſtronomy in the figures of the Zodiack: wherein they are not juſtified unto ſtrict reſemblances, but rather made out from the effects of Sun or Moon in theſe ſeveral portions of heaven, or from peculiar influences of thoſe Conſtellations, which ſome way make good their names.

Tacit. de vita Jul. Agric.

Junct. in Sph. l. de Sacro boſco cap. 2.

Which notwithſtanding being now authentick by preſcription, may be retained in their naked acceptions, and names tranſlated from ſubſtances known on earth. And therefore the learned *Hevelius* in his accurate Selenography, or deſcription of the Moon, hath well tranſlated the known appellations of Regions, Seas and Mountains, unto the parts of that Luminary: and rather than uſe invented names or humane denominations, with witty congruity hath placed *Mount Sinai*, *Taurus*, *Maotis Palus*, the Mediterranean Sea, *Mauritania*, *Sicily* and *Aſia Minor* in the Moon.

The Cabala of the Stars.

More hardly can we find the Hebrew letters in the Heavens made out of the greater and leſſer Stars, which put together do make up words, wherein Cabaliſtical Speculators conceive they read events of future things; and how from the Stars in the head of *Meduſa*, to make out the word *Charab*; and thereby deſolation preſignified unto *Greece* or *Javan*, numerally characterized in that word, requireth no rigid Reader.

Greffarel out of *C. Chomer.*

Athan. Kircher. in proœmio.

It is not eaſie to reconcile the different accounts of longitude, while in modern tables the hundred and eighty degree, is more than thirty degrees beyond that part, where *Ptolomy* placeth an 180. Nor will the wider and more Weſtern term of Longitude, from whence the Moderns begin their commenſuration, ſufficiently ſalve the difference. The Ancients began the meaſure of Longitude from the fortunate Iſlands or Canaries, the Moderns from the Azores or Iſlands of S. *Michael*; but ſince the Azores are but fifteen degrees more Weſt, why the Moderns ſhould reckon 180. where *Ptolomy* accounteth

accounteth above 220. or though they take in 15 degrees at the Weſt, why they ſhould reckon 30 at the Eaſt, beyond the ſame meaſure, is yet to be determined; nor would it be much advantaged, if we ſhould conceive that the compute of *Ptolomy* were not ſo agreeable unto the Canaries, as the *Heſperides* or Iſlands of *Cabo Verde*. *Robertus Hues de globis.*

Whether the compute of months from the firſt appearance of the Moon, which divers Nations have followed, be not a more perturbed way, than that which accounts from the conjunction, may ſeem of reaſonable doubt; not only from the uncertainty of its appearance in foul and cloudy weather, but unequal time in any; that is ſooner or later, according as the Moon ſhall be in the ſigns of long deſcenſion, as *Piſces*, *Aries*, *Taurus*, in the *Perigeum* or ſwifteſt motion, and in the Northern Latitude: whereby ſometimes it may be ſeen the very day of the change, as did obſervably happen 1654. in the months of *April* and *May*? or whether alſo the compute of the day be exactly made, from the viſible ariſing or ſetting of the Sun, becauſe the Sun is ſometimes naturally ſet, and under the Horizon, when viſibly it is above it; from the cauſes of refraction, and ſuch as make us behold a piece of ſilver in a baſin, when water is put upon it, which we could not diſcover before, as under the verge thereof. *Hevel. Selenog. cap. 9.*

When the Moon will be ſeen on the firſt day of the change.

Why the Sun is ſeen after it is ſet, or naturally under the Horizon.

Whether the globe of the earth be but a point, in reſpect of the Stars and Firmament, or how if the rayes thereof do fall upon a point, they are received in ſuch variety of Angles, appearing greater or leſſer from differences of refraction?

Whether if the motion of the Heavens ſhould ceaſe a while, all things would inſtantly periſh? and whether this aſſertion doth not make the frame of ſublunary things, to hold too looſe a dependency upon the firſt and conſerving cauſe? at leaſt impute too much unto the motion of the Heavens, whoſe eminent activities are by heat, light and influence, the motion it ſelf being barren, or chiefly ſerving for the due application of celeſtial virtues unto ſublunary bodies, as *Cabeus* hath learnedly obſerved?

To what the motion of the Heavens ſerveth; *Met. Lib.*

Whether Comets or blazing Stars be generally of ſuch terrible effects, as elder times have conceived them; for ſince it is found that many, from whence theſe predictions are drawn, have been above the Moon; why they may not be qualified from their poſitions, and aſpects which they hold with Stars of favourable natures; or why ſince they may be conceived to ariſe from the effluviums of other Stars, they may not retain the benignity of their Originals; or ſince the natures of the fixed Stars are aſtrologically differenced by the Planets, and are eſteemed Martial or Jovial, according to the colours whereby they anſwer theſe Planets; why although the red Comets do carry the portentions of *Mars*, the brightly white ſhould not be of the Influence of *Jupiter* or *Venus*, anſwerably unto *Cor Scorpii* and *Arcturus*; is not abſurd to doubt.

THE

THE SEVENTH BOOK.

Concerning many Hiſtorical Tenets generally received, and ſome deduced from the Hiſtory of Holy Scripture.

CHAP. I.

Of the Forbidden Fruit.

THAT the forbidden Fruit of Paradiſe was an Apple, is commonly believed, confirmed by Tradition, perpetuated by Writings, Verſes, Pictures; and ſome have been ſo bad *Proſodians*, as from thence to derive the Latin word *malum*, becauſe that fruit was the firſt occaſion of evil; wherein notwithſtanding determinations are preſumptuous, and many I perceive are of another belief. For ſome have conceived it a Vine; in the myſtery of whoſe fruit lay the expiation of the tranſgreſſion: *Goropius Becanus* reviving the conceit of *Barcephas*, peremptorily concludeth it to be the *Indian* Fig-tree; and by a witty Allegory labours to confirm the ſame. Again, ſome fruits paſs under the name of *Adam*'s Apples, which in common acception admit not that appellation; the one deſcribed by *Matthiolus* under the name of *Pomum Adami*, a very fair fruit, and not unlike a Citron, but ſomewhat rougher, chopt and cranied, vulgarly conceived the marks of *Adam*'s teeth. Another, the fruit of that Plant which *Serapion* termeth *Muſa*, but the Eaſtern Chriſtians commonly the Apples of Paradiſe; not reſembling an Apple in figure, and in taſte a Melon or Cowcumber. Which fruits although they have received appellations ſuitable unto the tradition, yet we can not from thence infer they were this fruit in queſtion: No more than *Arbor vitæ*, ſo commonly called, to obtain its name from the Tree of Life in Paradiſe, or *Arbor Judæ*, to be the ſame which ſupplied the Gibbet unto *Judas*.

Opinions, of what kind the forbidden Fruit was.

Again,

Again, There is no determination in the Text; wherein is only particulared, that it was the fruit of a tree good for food, and pleasant unto the eye, in which regards many excel the Apple; and therefore learned men do wisely conceive it inexplicable; and *Philo* puts determination unto despair, when he affirmeth the same kind of fruit was never produced since. Surely were it not requisite to have been concealed, it had not passed unspecified; nor the tree revealed which concealed their nakedness, and that concealed which revealed it; for in the same Chapter mention is made of fig-leaves. And the like particulars, although they seem uncircumstantial, are oft set down in holy Scripture; so is it specified that *Elias* sat under a Juniper tree, *Absolom* hanged by an Oak, and *Zacheus* got up into a Sycomore.

Jacob's Sciatica, *see* Gen. 32. 25, 31, 32.

And although to condemn such Indeterminables unto him that demanded on what hand *Venus* was wounded, the Philosopher thought it a sufficient resolution to re-inquire upon what leg King *Philip* halted; and the *Jews* not undoubtedly resolved of the *Sciatica* side of *Jacob*, do cautelously in their diet abstain from the sinews of both: yet are there many nice particulars which may be authentically determined. That *Peter* cut off the right ear of *Malchus*, is beyond all doubt. That our Saviour eat the Passover in an upper room, we may determine from the Text. And some we may concede which the Scripture plainly defines not. That the Dyal of *Ahaz* was placed upon the West-side of the Temple, we will not deny, or contradict the description of *Adricomius*. That *Abraham's* servant put his hand under his right thigh, we shall not question; and that the Thief on the right hand was saved, and the other on the left reprobated, to make good the Method of the last judicial dismission, we are ready to admit. But surely in vain we enquire of what wood was *Moses* rod, or the tree that sweetned the waters. Or though tradition or humane History might afford some light, whether the Crown of thorns was made of *Paliurus*; Whether the cross of Christ were made of those four woods in the Distich of *Durantes*, or only of Oak, according unto *Lipsius* and *Goropius*, we labour not to determine. For though hereof prudent Symbols and pious Allegories be made by wiser Conceivers; yet common heads will flie unto superstitious applications, and hardly avoid miraculous or magical expectations.

Pes Cedrus est, truncus Cupressus, Oliva supremum, Palmáq; transversum Christi sunt in cruce lignum.

Now the ground or reason that occasioned this expression by an Apple, might be the community of this fruit, and which is often taken for any other. So the Goddess of Gardens is termed *Pomona*; so the Proverb expresseth it, to give Apples unto *Alcinous*; so the fruit which *Paris* decided was called an Apple; so in the garden of *Hesperides* (which many conceive a fiction drawn from Paradise) we read of golden Apples guarded by the Dragon. And to speak strictly in this appellation, they placed it more safely than any other; for beside the great variety of Apples, the word in Greek comprehendeth Oranges, Lemmons, Citrons, Quinces; and as *Ruellius* defineth, such fruits as have no stone within, and a soft covering without; excepting the Pomegranate. And will extend much farther in the acception of *Spigelius*, who comprehendeth all round fruits under the name of Apples, not excluding Nuts and Plumbs.

Ruel. *de stirpium natura.*

Isagoge in rem Herbariam.

Cant. 8.

It hath been promoted in some constructions from a passage in the *Canticles*, as it runs in the vulgar translation, *Sub arbore malo suscitavi te, ibi corrupta est mater tua, ibi violata est genetrix tua*; Which words notwithstanding parabolically intended, admit no literal inference, and are of little force in our translation, *I raised thee under an Apple-tree, there thy mother brought thee forth, there she brought thee forth that bare thee.* So when from a basket of Summer-fruits or Apples, as the Vulgar rendreth them, God by *Amos* foretold the destruction of his people; we cannot say they had any reference unto the fruit of Paradise, which was the destruction of man; but thereby was declared the propinquity of their desolation, and that their tranquillity was of no longer duration than those * horary or soon decaying fruits of Summer. Nor when it is said in the same translation, *Poma desiderii animæ tuæ discesserunt à te*, the Apples that thy Soul lusted after are departed from thee, is there any allusion therein unto the fruit of Paradise: but thereby is threatned unto

* *Fructus horæi.*

Babylon,

Babylon, that the pleasures and delights of their Palate should forsake them. And we read in *Pierius*, that an Apple was the Hieroglyphick of Love, and that the *Statua* of *Venus* was made with one in her hand. So the little Cupids in the figures of *Philostratus* do play with Apples in a garden; and there want not some who have symbolized the Apple of Paradise unto such constructions.

Philostrat. *figur. 6. De amoribus.*

Since therefore after this fruit, curiosity fruitlesly enquireth, and confidence blindly determineth, we shall surcease our Inquisition; rather troubled that it was tasted, than troubling our selves in its decision; this only we observe, when things are left uncertain, Men will assure them by determination. Which is not only verified concerning the fruit, but the Serpent that perswaded; many defining the kind or species thereof. So *Bonaventure* and *Comestor* affirm it was a Dragon, *Eugubinus* a Basilisk, *Delrio* a Viper, and others a common Snake. Wherein Men still continue the delusion of the Serpent, who having deceived *Eve* in the main, sets her posterity on work to mistake in the circumstance, and endeavours to propagate errors at any hand. And those he surely most desireth which concern either God or himself; for they dishonour God who is absolute truth and goodness; but for himself, who is extreamly evil, and the worst we can conceive, by aberration of conceit they may extenuate his depravity, and ascribe some goodness unto him.

Opinions of what kind the Serpent was, *&c.*

CHAP. II.

That a Man hath one Rib less than a Woman.

THat a Man hath one Rib less than a Woman, is a common conceit derived from the History of *Genesis*, wherein it stands delivered, that *Eve* was framed out of a Rib of *Adam*; whence 'tis concluded the sex of Man still wants that Rib our Father lost in *Eve*. And this is not only passant with the many, but was urged against *Columbus* in an Anatomy of his at *Pisa*, where having prepared the Sceleton of a Woman that chanced to have thirteen Ribs on one side, there arose a party that cried him down, and even unto oaths affirmed, this was the Rib wherein a Woman exceeded. Were this true, it would ocularly silence that dispute out of which side *Eve* was framed; it would determine the opinion of *Oleaster*, that she was made out of the Ribs of both sides, or such as from the expression of the * Text maintain there was a plurality of Ribs required; and might indeed decry the parabolical exposition of *Origen*, *Cajetan*, and such as fearing to concede a monstrosity, or mutilate the integrity of *Adam*, preventively conceive the creation of thirteen Ribs.

* *Os ex ossibus meis.*

But this will not consist with reason, or inspection. For if we survey the Sceleton of both sexes, and therein the compage of bones, we shall readily discover that Men and Women have four and twenty Ribs, that is, twelve on each side, seven greater annexed unto the *Sternon*, and five lesser which come short thereof. Wherein if it sometimes happen that either sex exceed, the conformation is irregular, deflecting from the common rate or number, and no more inferrible upon mankind, than the monstrosity of the Son of *Rapha*, or the vitious excess in the number of fingers and toes. And although some difference there be in figure, and the female *os innominatum* be somewhat more protuberant, to make a fairer cavity for the Infant; the *coccyx* sometime more reflected, to give the easier delivery; and the Ribs themselves seem a little flatter; yet are they equal in number. And therefore while *Aristotle* doubteth the relations made of Nations, which had but seven Ribs on a side, and yet delivereth, that Men have generally no more than eight; as he rejecteth their History, so can we not accept of his Anatomy.

How many Ribs commonly in Men and Women.

Again, Although we concede there wanted one Rib in the Sceleton of *Adam*, yet were it repugnant unto reaſon, and common obſervation, that his poſterity ſhould want the ſame. For we obſerve that mutilations are not tranſmitted from Father unto Son; the blind begetting ſuch as can ſee, Men with one eye Children with two, and Cripples mutilate in their own perſons do come out perfect in their generations. For the ſeed conveyeth with it not only the extract and ſingle Idea of every part, whereby it tranſmits their perfections or infirmities; but double and over again; whereby ſometimes it multipliciouſly delineates the ſame, as in Twins, in mixed and numerous generations. Parts of the ſeed do ſeem to contain the Idea and power of the whole; ſo Parents deprived of hands, beget manual iſſues, and the defect of thoſe parts is ſupplied by the Idea of others. So in one grain of corn appearing ſimilary and inſufficient for a plural germination, there lyeth dormant the virtuality of many other; and from thence ſometimes proceed above an hundred Ears. And thus may be made out the cauſe of multiparous productions; for though the ſeminal materials diſperſe and ſeparate in the matrix, the formative operator will not delineate a part, but endeavour the formation of the whole; effecting the ſame as far as the matter will permit, and from dividing materials attempt entire formations. And therefore, though wondrous ſtrange, it may not be impoſſible what is confirmed at *Lauſdun* concerning the Counteſs of *Holland*, nor what *Albertus* reports of the Birth of an hundred and fifty. And if we conſider the magnalities of generation in ſome things, we ſhall not controvert it's poſſibilities in others: nor eaſily queſtion that great work, whoſe wonders are only ſecond unto thoſe of the Creation, and a cloſe apprehenſion of the one, might perhaps afford a glimmering light, and crepuſculous glance of the other.

CHAP. III.

Of Methuſelah.

WHat hath been every where opinioned by all Men, and in all times, is more than paradoxical to diſpute; and ſo that *Methuſelah* was the longeſt liver of all the poſterity of *Adam*, we quietly believe: but that he muſt needs be ſo, is perhaps below paralogy to deny. For hereof there is no determination from the Text; wherein it is only particulared he was the longeſt Liver of all the Patriarchs whoſe age is there expreſſed; but that he out-lived all others, we cannot well conclude. For of thoſe nine whoſe death is mentioned before the flood, the Text expreſſeth that *Enoch* was the ſhorteſt Liver; who ſaw but three hundred ſixty five years. But to affirm from hence, none of the reſt, whoſe age is not expreſſed, did die before that time, is ſurely an illation whereto we cannot aſſent.

Again, Many perſons there were in thoſe days of longevity, of whoſe age notwithſtanding there is no account in Scripture; as of the race of *Cain*, the Wives of the nine Patriarchs, with all the Sons and Daughters that every one begat: whereof perhaps ſome perſons might out-live *Methuſelah*; the Text intending only the maſculine line of *Seth*, conduceable unto the Genealogy of our Saviour, and the antediluvian Chronology. And therefore we muſt not contract the lives of thoſe which are left in ſilence by *Moſes*; for neither is the age of *Abel* expreſſed in the Scripture, yet is he conceived far elder than commonly opinioned; and if we allow the concluſion of his Epitaph as made by *Adam*, and ſo ſet down by *Salian*, *Poſuit mœrens pater, cui à filio juſtius poſitum foret, Anno ab ortu rerum* 130. *Ab Abele nato* 129. we ſhall not need to doubt. Which notwithſtanding *Cajetan*

and

and others confirm; nor is it improbable, if we conceive that *Abel* was born in the ſecond year of *Adam*, and *Seth* a year after the death of *Abel*: for ſo it being ſaid, that *Adam* was an hundred and thirty years old when he begat *Seth*, *Abel* muſt periſh the year before, which was one hundred twenty nine.

And if the account of *Cain* extend unto the Deluge, it may not be improbable that ſome thereof exceeded any of *Seth*. Nor is it unlikely in life, riches, power and temporal bleſſings, they might ſurpaſs them in this World, whoſe lives related unto the next. For ſo when the ſeed of *Jacob* was under affliction and captivity, that of *Iſmael* and *Eſau* flouriſhed and grew mighty, there proceeding from the one twelve Princes, from the other no leſs than fourteen Dukes and eight Kings. And whereas the age of *Cain* and his poſterity is not delivered in the Text, ſome do ſalve it from the ſecret method of Scripture, which ſometimes wholly omits, but ſeldom or never delivers the entire duration of wicked and faithleſs perſons, as is obſervable in the Hiſtory of *Eſau*, and the Kings of *Iſrael* and *Judah*. And therefore when mention is made that *Iſmael* lived 127 years, ſome conceive he adhered unto the faith of *Abraham*; for ſo did others who were not deſcended from *Jacob*; for * *Job* is thought to be an *Idumean*, and of the ſeed of *Eſau*.

* *Job* thought by ſome to be of the race of *Eſau*.

Laſtly (although we rely not thereon) we will not omit that conceit urged by learned Men, that *Adam* was elder than *Methuſelah*; inaſmuch as he was created in the perfect age of Man, which was in thoſe days 50 or 60 years, for about that time we read that they begat Children; ſo that if unto 930 we add 60 years, he will exceed *Methuſelah*. And therefore if not in length of days, at leaſt in old age he ſurpaſſed others; he was older than all, who was never ſo young as any. For though he knew old age, he was never acquainted with puberty, youth or Infancy; and ſo in a ſtrict account he begat Children at one year old. And if the uſual compute will hold, that Men are of the ſame age which are born within compaſs of the ſame year; *Eve* was as old as her husband and parent *Adam*, and *Cain* their Son coetaneous unto both.

Now that conception, that no Man did ever attain unto a thouſand years, becauſe none ſhould ever be one day old in the ſight of the Lord, unto whom according to that of *David*, *A thouſand years are but one day*; doth not advantage *Methuſelah*. And being deduced from a popular expreſſion, which will not ſtand a *Metaphyſical* and ſtrict examination, is not of force to divert a ſerious enquirer. For unto God a thouſand years are no more than one moment, and in his ſight *Methuſelah* lived no nearer one day than *Abel*, for all parts of time are alike unto him, unto whom none are referrible; and all things preſent unto whom nothing is paſt or to come. And therefore, although we be meaſured by the Zone of time, and the flowing and continued inſtants thereof do weave at laſt a line and circle about the eldeſt: yet can we not thus commenſurate the Sphere of *Triſmegiſtus*; or ſumm up the unſucceſſive and ſtable duration of God.

CHAP. IV.

That there was no Rain-bow before the Flood.

THat there ſhall no Rain-bow appear forty years before the end of the World, and that the preceding drought unto that great flame ſhall exhauſt the materials of this Meteor, was an aſſertion grounded upon no ſolid reaſon: but that there was not any in ſixteen hundred years, that is, before the flood, ſeems deduceable from Holy Scripture, *Gen.* 9. *I do ſet my bow in the clouds, and it ſhall be for a token of a Covenant between me and the Earth.* From whence notwithſtanding we cannot conclude the non-exiſtence of the Rain-bow; nor is that Chronology naturally eſtabliſhed, which computeth the antiquity of effects ariſing from phyſical and ſetled cauſes, by additional impoſitions from voluntary determinators. Now by the decree of reaſon and Philoſophy, the Rain-bow hath its ground in Nature, as cauſed by the rays of the Sun, falling upon a rorid and oppoſite cloud: whereof ſome reflected, others refracted, beget that ſemi-circular variety we generally call the Rain-bow; which muſt ſucceed upon concurrence of cauſes and ſubjects aptly prediſpoſed. And therefore, to conceive there was no Rain-bow before, becauſe God choſe this out as a token of the Covenant, is to conclude the exiſtence of things from their ſignalities, or of what is objected unto the ſenſe, a coexiſtence with that which is internally preſented unto the underſtanding. With equal reaſon we may infer there was no water before the inſtitution of Baptiſm, nor Bread and Wine before the Holy Euchariſt.

That there is a Rain-bow of the Moon.

Again, while Men deny the antiquity of one Rain-bowt, hey anciently concede another. For, beſide the ſolary Iris which God ſhewed unto *Noah*, there is another Lunary, whoſe efficient is the Moon, viſible only in the night, moſt commonly at full Moon, and ſome degrees above the Horizon. Now the exiſtence hereof Men do not controvert, although effected by a different Luminary in the ſame way with the other. And probably appeared later, as being of rare appearance and rarer obſervation, and many there are which think there is no ſuch thing in Nature. And therefore by caſual ſpectators they are lookt upon like prodigies, and ſignifications made, not ſignified by their natures.

Laſtly, we ſhall not need to conceive God made the Rain-bow at this time, if we conſider that in its created and prediſpoſed nature, it was more proper for this ſignification than any other Meteor or celeſtial appearancy whatſoever. Thunder and Lightning had too much terrour to have been tokens of mercy; Comets or blazing Stars appear too ſeldom to put us in mind of a Covenant to be remembred often: and might rather ſignifie the World ſhould be once deſtroyed by Fire, than never again by water. The *Galaxia* or milky Circle had been more probable; for (beſide that unto the latitude of thirty, it becomes their Horizon twice in four and twenty hours, and unto ſuch as live under the Æquator, in that ſpace the whole Circle appeareth) part thereof is viſible unto any ſituation; but being only diſcoverable in the night, and when the air is clear, it becomes of unfrequent and comfortleſs ſignification. A fixed Star had not been viſible unto all the Globe, and ſo of too narrow a ſignality in a Covenant concerning all. But Rain-bows are ſeen unto all the World, and every poſition of Sphere. Unto our own elevation they may appear in the morning, while the Sun hath attained about forty five degrees above the Horizon (which is conceived the largeſt ſemidiameter of any Iris (and ſo in the afternoon when it hath declined unto that altitude again; which height the Sun not attaining in Winter, rain-bows may happen with us at noon or any time. Unto a right poſition of Sphere they may appear three hours after the riſing of the Sun,

and

and three before its ſetting; for the Sun aſcending fifteen degrees an hour, in three attaineth forty five of altitude. Even unto a parallel Sphere, and ſuch as live under the Pole, for half a year ſome ſegments may appear at any time and under any quarter, the Sun not ſetting but walking round about them.

The natural ſignification of the Rain-bow.

But the propriety of its Election moſt properly appeareth in the natural ſignification and prognoſtick of it ſelf; as containing a mixt ſignality of rain and fair weather. For being in a rorid cloud and ready to drop, it declareth a pluvious diſpoſure in the air; but becauſe when it appears, the Sun muſt alſo ſhine, there can be no univerſal ſhowers, and conſequently no Deluge. Thus when the Windows of the great Deep were open, in vain Men lookt for the Rain-bow: for at that time it could not be ſeen, which after appeared unto *Noah*. It might be therefore exiſtent before the Flood, and had in nature ſome ground of its addition. Unto that of nature God ſuperadded an aſſurance of its Promiſe, that is, never to hinder its appearance or ſo to repleniſh the Heavens again, as that we ſhould behold it no more. And thus without diſparaging the promiſe, it might rain at the ſame time when God ſhewed it unto *Noah*; thus was there more therein than the Heathens underſtood when they called it the *Nuncia* of the gods, and * the laugh of weeping Heaven; and thus may it be elegantly ſaid, I put my bow, not my arrow in the clouds, that is, in the menace of rain the mercy of fair weather.

* *Riſus ploranti-tis Olympi.*

Cabaliſtical heads, who from that expreſſion in *Eſay*, do make a book of heaven, and read therein the great concernments of Earth, do literally play on this, and from its ſemicircular figure, reſembling the Hebrew letter Caph, whereby is ſignified the uncomfortable number of twenty, at which years *Joſeph* was ſold, which *Jacob* lived under *Laban*, and at which Men were to go to War, do note a propriety in its ſignification; as thereby declaring the diſmal Time of the Deluge. And Chriſtian conceits do ſeem to ſtrain as high, while from the irradiation of the Sun upon a cloud, they apprehend the myſterie of the Sun of Righteouſneſs in the obſcurity of Fleſh; by the colours green and red, the two deſtructions of the World by Fire and water; or by the colours of Blood and water, the myſteries of Baptiſm, and the Holy Euchariſt.

Iſa. 34. 4.

Laudable therefore is the cuſtom of the *Jews*, who upon the appearance of the Rain-bow, do magnifie the fidelity of God in the memory of his Covenant; according to that of *Syracides*, Look upon the Rain-bow, and praiſe him that made it. And though ſome pious and Chriſtian pens have only ſymbolized the ſame from the myſterie of its colours, yet are there other affections which might admit of Theological alluſions. Nor would he find a more improper ſubject, that ſhould conſider that the colours are made by refraction of Light, and the ſhadows that limit that light; that the Center of the Sun, the Rain-bow, and the eye of the Beholder muſt be in one right line, that the Spectator muſt be between the Sun and the Rain-bow; that ſometime three appear, ſometime one reverſed. With many others, conſiderable in Meteorological Divinity, which would more ſenſibly make out the Epithete of the Heathens, and the expreſſion of the Son of *Syrach*, *Very beautiful is the Rain-bow, it compaſſeth the Heaven about with a glorious circle, and the Hands of the moſt High have bended it.*

Thaumantias.

CHAP.

CHAP. V.

Of Sem, Ham *and* Japhet.

CONcerning the three ſons of *Noah*, *Sem*, *Ham* and *Japhet*, that the order of their nativity was according to that of numeration, and *Japhet* the youngeſt ſon, as moſt believe, as *Auſtin* and others account, the ſons of *Japhet*, and *Europeans* need not grant: nor will it ſo well concord unto the letter of the Text, and its readieſt Interpretations. For ſo is it ſaid in our Tranſlation, *Sem the Father of all the ſons of Heber the brother of Japhet the elder*: ſo by the Septuagint, and ſo by that of *Tremelius*. And therefore when the Vulgar reads it, *Fratre Japhet majore*, the miſtake, as *Junius* obſerveth, might be committed by the neglect of the Hebrew accent; which occaſioned *Jerom* ſo to render it, and many after to believe it. Nor is that Argument contemptible which is deduced from their Chronology; for probable it is that *Noah* had none of them before, and begat them from that year when it is ſaid he was five hundred years old, and begat *Sem*, *Ham* and *Japhet*. Again it is ſaid he was ſix hundred years old at the flood, and that two years after, *Sem* was but an hundred; therefore *Sem* muſt be born when *Noah* was five hundred and two, and ſome other before in the year of five hundred and one. Gen. 10. 21

Now whereas the Scripture affordeth the priority of order unto *Sem*, we cannot from thence infer his primogeniture. For in *Sem* the holy line was continued: and therefore however born, his genealogy was moſt remarkable. So is it not unuſual in holy Scripture to nominate the younger before the elder: ſo is it ſaid, That * *Tarah* begat *Abraham*, *Nachor* and *Haram*: whereas *Haram* was the eldeſt. So † *Rebekkah* is termed the mother of *Jacob* and *Eſau*. Nor is it ſtrange the younger ſhould be firſt in nomination, who have commonly had the priority in the † bleſſings of God, and been firſt in his Benediction. So *Abel* was accepted before *Cain*, *Iſaac* the younger preferred before *Iſhmael* the elder, *Jacob* before *Eſau*, *Joſeph* was the youngeſt of twelve, and *David* the eleventh ſon and minor cadet of *Jeſſe*.

* Gen. 11.
† Gen. 28.

† In divine Benedictions, the Younger often preferred

Laſtly, though *Japhet* were not elder than *Sem*, yet muſt we not affirm that he was younger than *Cham*: for it is plainly delivered, that after *Sem* and *Japhet* had covered *Noah*, he awaked, and knew what his youngeſt ſon had done unto him; υἱὸς ὁ νεώτερος, is the expreſſion of the Septuagint, *Filius minor* of *Jerom*, and *minimus* of *Tremelius*. And upon theſe grounds perhaps *Joſephus* doth vary from the Scripture enumeration, and nameth them *Sem*, *Japhet* and *Cham*; which is alſo obſerved by the *Annian Beroſus*; *Noah cum tribus filiis, Semo, Japeto, Chem.* And therefore although in the priority of *Sem* and *Japhet*, there may be ſome difficulty, though *Cyril*, *Epiphanius* and *Auſtin* have accounted *Sem* the elder, and *Salian* the Annaliſt, and *Petavius* the Chronologiſt contend for the ſame; yet *Cham* is more plainly and confeſſedly named the youngeſt in the Text. Gen. 9. 24

And this is more conformable unto the Pagan hiſtory and Gentile account hereof, unto whom *Noah* was *Saturn*, whoſe ſymbol was a ſhip, as relating unto the Ark, and who is ſaid to have divided the world between his three ſons. *Ham* is conceived to be *Jupiter*, who was the youngeſt ſon; worſhipped by the name of *Hamon*, which was the *Egyptian* and *African* name for *Jupiter*, who is ſaid to have cut off the genitals of his father, derived from the hiſtory of *Ham*, who beheld the nakedneſs of his, and by no hard miſtake might be confirmed from the Text, as * *Bochartus* hath well obſerved.

That *Noah* and *Saturn* were the ſame perſons.

* Gen. 9. 22. Reading *Velagged & abſcidit*, for *Velegged & nunciavit*. Bochartus *de* Geographiâ ſacrâ.

CHAP.

CHAP. VI.

That the Tower of Babel *was erected against a second Deluge.*

AN Opinion there is of some generality, that our Fathers after the flood attempted the Tower of *Babel* to secure themselves against a second Deluge. Which however affirmed by *Josephus* and others, hath seemed improbable unto many who have discoursed hereon. For (beside that they could not be ignorant of the Promise of God never to drown the world again, and had the Rain-bow before their eyes to put them in mind thereof) it is improbable from the nature of the Deluge; which being not possibly causable from natural showres above, or watery eruptions below, but requiring a supernatural hand, and such as all acknowledg irresistible; must needs disparage their knowledg and judgment in so successless attempts.

Again, They must probably hear, and some might know, that the waters of the flood ascended fifteen cubits above the highest mountains. Now, if as some define, the perpendicular altitude of the highest mountains be four miles; or as others, but fifteen furlongs, it is not easily conceived how such a structure could be effected. Although we allowed the description of *Herodotus* concerning the Tower of *Belus*; whose lowest story was in height and breadth one furlong, and seven more built upon it; abating that of the *Annian Berosus*, the traditional relation of *Jerom*, and fabulous account of the *Jews*. Probable it is that what they attempted was feasible, otherwise they had been amply fooled in fruitless success of their labours, nor needed God to have hindred them, saying, *Nothing will be restrained from them, which they begin to do.*

It was improbable from the place, that is a Plain in the land of *Shinar*. And if the situation of *Babylon* were such at first as it was in the days of *Herodotus*; it was rather a seat of amenity and pleasure, than conducing unto this intention. It being in a very great Plain, and so improper a place to provide against a general Deluge by Towers and eminent structures, that they were fain to make provisions against particular and annual inundations by ditches and trenches, after the manner of *Egypt*. And therefore Sir *Walter Raleigh* accordingly objecteth: If the Nations which followed *Nimrod*, still doubted the surprise of a second flood, according to the opinions of the ancient *Hebrews*, it soundeth ill to the ear of Reason, that they would have spent many years in that low and overflown valley of *Mesopotamia*. And therefore in this situation, they chose a place more likely to have secured them from the worlds destruction by fire, than another Deluge of water: and as *Pierius* observeth, some have conceived that this was their intention. History of the World.

Lastly, The reason is delivered in the Text. *Let us build us a City and a Tower, whose top may reach unto heaven, and let us make us a name, lest we be scattered abroad upon the whole earth*; as we have already began to wander over a part. These were the open ends proposed unto the people; but the secret design of *Nimrod*, was to settle unto himself a place of dominion, and rule over his Brethren, as it after succeeded, according to the delivery of the Text, *The beginning of his kingdom was Babel.*

CHAP.

CHAP. VII.

Of the Mandrakes of Leah.

WE ſhall not omit the Mandrakes of *Leah*, according to the Hiſtory of *Geneſis*. *And Reuben went out in the daies of Wheat-harveſt, and found Mandrakes in the field, and brought them unto his mother Leah. Then Rachel ſaid unto Leah, Give me, I pray thee, of thy ſons Mandrakes: and ſhe ſaid unto her, Is it a ſmall matter that thou haſt taken my husband, and wouldeſt thou take my ſons Mandrakes alſo? And Rachel ſaid, Therefore he ſhall lie with thee this night for thy ſons Mandrakes.* From whence hath ariſen a common conceit, that *Rachel* requeſted theſe plants as a medicine of fecundation, or whereby ſhe might become fruitful. Which notwithſtanding is very queſtionable, and of incertain truth.

For firſt from the compariſon of one Text with another, whether the Mandrakes here mentioned, be the ſame plant which holds that name with us, there is ſome cauſe to doubt. The word is uſed in another place of Scripture, when the Church inviting her beloved into the fields, among the delightfull fruits of Grapes and Pomegranates, it is ſaid, *The Mandrakes give a ſmell, and at our gates are all manner of pleaſant fruits.* Now inſtead of a ſmell of Delight, our Mandrakes afford a papaverous and unpleaſant odor, whether in the Leaf or Apple, as is diſcoverable in their ſimplicity or mixture. The ſame is alſo dubious from the different interpretations; for though the Septuagint and *Joſephus* do render it the Apples of Mandrakes in this Text, yet in the other of the *Cantieles*, the *Chaldee* Paraphraſe termeth it Balſame. R. *Solomon*, as *Druſius* obſerveth, conceives it to be that plant the *Arabians* named Jeſemin. *Oleaſter*, and *Georgius Venetus*, the Lily; and that the word *Dudaim*, may comprehend any plant that hath a good ſmell, reſembleth a womans breaſt, and flouriſheth in wheat harveſt. *Tremelius* interprets the ſame for any amiable flowers of a pleaſant and delightful odour: but the *Geneva* Tranſlators have been more wary than any: for although they retain the word Mandrake in the Text, they in effect retract it in the Margin: wherein is ſet down, the word in the Original is *Dudaim*, which is a kind of Fruit or Flower unknown.

Cant. 7.

Nor ſhall we wonder at the diſſent of expoſition, and difficulty of definition concerning this Text, if we perpend how variouſly the Vegetables of Scripture are expounded, and how hard it is in many places to make out the *ſpecies* determined. Thus are we at variance concerning the plant that covered *Jonas*; which though the Septuagint doth render *Colocynthis*, the *Spaniſh* Calabaca, and ours accordingly a Gourd: yet the vulgar tranſlates it *Hedera* or Ivy; and as *Grotius* obſerveth, *Jerom* thus tranſlated it, not as the ſame plant, but beſt apprehended thereby. The Italian of *Diodati*, and that of *Tremelius* have named it *Ricinus*, and ſo hath ours in the Margin, for *palma Chriſti* is the ſame with *Ricinus*. The *Geneva* Tranſlators have herein been alſo circumſpect, for they have retained the Original word *Kikaion*, and ours hath alſo affixed the ſame unto the Margin.

The Vegetables in H. Scripture, how variouſly expounded.

Nor are they indeed alwayes the ſame plants which are delivered under the ſame name, and appellations commonly received amongſt us. So when it is ſaid of *Solomon*, that he writ of plants *from the Cedar of Lebanus, unto the Hyſſop that groweth upon the wall*, that is from the greateſt unto the ſmalleſt, it cannot be well conceived our common Hyſſop; for neither is that the leaſt of Vegetables, nor obſerved to grow upon walls; but rather as *Lemnius* well conceiveth, ſome kind of the capillaries, which are very ſmall plants, and only grow upon walls and ſtony places. Nor are the four ſpecies in the holy oyntment, Cinanmon, Myrrh, Calamus and Caſſia, nor the other in the holy perfume, Frankincenſe, Stacte, Onycha and Galbanum, ſo agreeably expounded unto thoſe in

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uſe with us, as not to leave conſiderable doubts behind them. Nor muſt that perhaps be taken for a ſimple unguent, which *Matthew* only termeth a precious oyntment; but rather a compoſition, as *Mark* and *John* imply by piſtick *Nard*, that is faithfully diſpenſed, and may be that famous compoſition deſcribed by *Dioſcorides*, made of oyl of Ben, *Malabathrum*, *Juncus Odoratus*, *Coſtus*, *Amomum*, Myrrh, Balſam and Nard; which *Galen* affirmeth to have been in uſe with the delicate Dames of *Rome*, and that the beſt thereof was made at *Laodicea*, from whence by Merchants it was conveyed unto other parts. But how to make out that Tranſlation concerning the Tithe of Mint, Aniſe and Cumin, we are ſtill to ſeek; for we find not a word in the Text that can properly be rendred Aniſe; the Greek being ἄνηθον, which the Latines call *Anethum*, and is properly Engliſhed Dill. Laſtly, What Meteor that was, that fed the *Iſraelites* ſo many years, they muſt riſe again to inform us. Nor do they make it out, who will have it the ſame with our Manna; nor will any one kind thereof, or hardly all kinds we read of, be able to anſwer the qualities thereof, delivered in the Scripture; that is, to fall upon the ground, to breed worms, to melt with the Sun, to taſte like freſh oyl, to be grounded in Mills, to be like Coriander ſeed, and of the colour of Bdellium.

v. *Matthioli Epiſt.*

v. *Doctiſſimum Chryſoſtom. Magnenum de Manna.*

Again, It is not deducible from the Text or concurrent ſentence of Comments, that *Rachel* had any ſuch intention, and moſt do reſt in the determination of *Auſtin*, that ſhe deſired them for rarity, pulchritude or ſuavity. Nor is it probable ſhe would have reſigned her bed unto *Leah*, when at the ſame time ſhe had obtained a medicine to fructifie her ſelf. And therefore *Druſius* who hath expreſly and favourably treated hereof, is ſo far from conceding this intention, that he plainly concludeth, *Hoc quo modo illis in mentem venerit, conjicere nequeo*; how this conceit fell into mens minds, it cannot fall into mine; for the Scripture delivereth it not, nor can it be clearly deduced from the Text.

Thirdly, If *Rachel* had any ſuch intention, yet had they no ſuch effect, for ſhe conceived not many years after of *Joſeph*; whereas in the mean time *Leah* had three children, *Iſachar*, *Zebulon* and *Dinah*.

Laſtly, Although at that time they failed of this effect, yet is it mainly queſtionable whether they had any ſuch vertue either in the opinons of thoſe times, or in their proper nature. That the opinion was popular in the land of *Canaan*, it is improbable, and had *Leah* underſtood thus much, ſhe would not ſurely have parted with fruits of ſuch a faculty; eſpecially unto *Rachel*, who was no friend unto her. As for its proper nature, the Ancients have generally eſteemed it Narcotick or ſtupefactive, and it is to be found in the liſt of poyſons, ſet down by *Dioſcorides*, *Galen*, *Ætius*, *Ægineta*, and ſeveral Antidotes delivered by them againſt it. It was I confeſs from good Antiquity, and in the days of *Theophraſtus* accounted a Philtre, or Plant that conciliates affection; and ſo delivered by *Dioſcorides*. And this intent might ſeem moſt probable, had they not been the wives of holy *Jacob*: had *Rachel* preſented them unto him, and not requeſted them for her ſelf.

Now what *Dioſcorides* affirmeth in favour of this effect, that the grains of the apples of Mandrakes mundifie the Matrix, and applied with Sulphur, ſtop the fluxes of women, he overthrows again by qualities deſtructive unto conception; affirming alſo that the juice thereof purgeth upward like Hellebore; and applied in peſſaries provokes the menſtruous flows, and procures abortion. *Petrus Hiſpanus*, or Pope *John* the twentieth ſpeaks more directly in his *Theſaurus pauperum*: wherein among the receipts of fecundation, he experimentally commendeth the wine of Mandrakes given with *Triphera magna*. But the ſoul of the medicine may lie in *Triphera magna*, an excellent compoſition, and for this effect commended by *Nicolaus*. And whereas *Levinus Lemnius* that eminent Phyſician doth alſo concede this effect, it is from manifeſt cauſes and qualities elemental occaſionally producing the ſame. For he imputeth the ſame unto the coldneſs of that ſimple, and is of opinion that in hot climates, and where the uterine parts exceed in heat, by the coldneſs hereof they may be reduced into a conceptive conſtitution, and Craſis accommodable unto generation; whereby indeed we will not deny, the due and frequent uſe may proceed unto ſome effect,

from whence notwithstanding we cannot infer a fertilitating condition or property of fecundation. For in this way all Vegetables do make fruitful according unto the complexion of the Matrix; if that excel in heat, Plants exceeding in cold do rectifie it; if it be cold, simples that are hot reduce it; if dry moist, if moist dry correct it; in which division all Plants are comprehended. But to distinguish thus much is a point of Art, and beyond the Method of *Rachels* or feminine Physick. Again, Whereas it may be thought that *Mandrakes* may fecundate, since *Poppy* hath obtained the Epithete of fruitful, and that fertility was Hieroglyphically described by *Venus* with an head of *Poppy* in her hand; the reason hereof was the multitude of seed within it self, and no such multiplying in humane generation. And lastly, whereas they may seem to have this quality, since *Opium* it self is conceived to extimulate unto Venery, and for that intent is sometimes used by *Turks*, *Persians*, and most oriental Nations; although *Winclerus* doth seem to favour the conceit, yet *Amatus Lusitanus*, and *Rodericus à Castro* are against it; *Garcias ab horto* refutes it from experiment; and they speak probably who affirm the intent and effect of eating Opium, is not so much to invigorate themselves in coition, as to prolong the Act, and spin out the motions of carnality.

Opium of what effect in Venery.

CHAP. VIII.

Of the three Kings of Collein.

A Common conceit there is of the three Kings of *Collein*, conceived to be the wise men that travelled unto our Saviour by the direction of the Star. Wherein (omitting the large Discourses of *Baronius*, *Pineda* and *Montacutius*,) that they might be Kings, beside the Ancient Tradition and Authority of many Fathers, the Scripture also implieth, *The Gentiles shall come to thy light, and Kings to the brightness of thy rising. The Kings of Tharsis and the Isles, the Kings of Arabia and Saba shall offer gifts.* Which places most Christians and many *Rabbins* interpret of the *Messiah*. Not that they are to be conceived potent Monarchs, or mighty Kings; but Toparchs, Kings of Cities or narrow Territories; such as were the Kings of *Sodom* and *Gomorrha*, the Kings of *Jericho* and *Ai*, the one and thirty which *Joshuah* subdued, and such as some conceive the Friends of *Job* to have been.

The *Magi* or wise men (*Matt.* 2.) What manner of Kings they were.

But although we grant they were Kings, yet can we not be assured they were three. For the Scripture maketh no mention of any number; and the number of their Presents, Gold, Myrrh and Frankincense, concludeth not the number of their persons; for these were the commodities of their Country, and such as probably the Queen of *Sheba* in one person had brought before unto *Solomon*. So did not the Sons of *Jacob* divide the Present unto *Joseph*, but are conceived to carry one for them all, according to the expression of their Father: *Take of the best fruits of the land in your vessels, and carry down the man a present.* And therefore their number being uncertain, what credit is to be given unto their names, *Gasper*, *Melchior*, *Balthazar*, what to the charm thereof against the falling sickness, or what unto their habits, complexions, and corporal accidents, we must rely on their uncertain story, and received pourtraicts of *Collein*.

Gasper fert myrrham, &c.

Lastly, Although we grant them Kings, and three in number, yet could we not conceive that they were Kings of *Collein*. For although *Collein* were the chief City of the *Ubii*, then called *Ubiopolis*, and afterwards *Agrippina*, yet will no History inform us there were three Kings thereof. Beside, these being Rulers in their Countries, and returning home, would have

have probably converted their Subjects: but according unto *Munſter*, their converſion was not wrought until ſeventy years after by *Maternus* a diſciple of *Peter*. And laſtly, it is ſaid that the wiſe men came from the Eaſt; but *Collein* is ſeated Weſt-ward from *Jeruſalem*; for *Collein* hath of longitude thirty four degrees, but *Jeruſalem* ſeventy two.

The ground of all was this. Theſe wiſe men or Kings, were probably of *Arabia*, and deſcended from *Abraham* by *Keturah*, who apprehending the myſtery of this Star, either by the Spirit of God, the prophecy of *Balaam*, the prophecy which *Suetonius* mentions, received and conſtantly believed through all the Eaſt, that out of *Jewry* one ſhould come that ſhould rule the whole world: or the divulged expectation of the *Jews* from the expiring prediction of *Daniel*; were by the ſame conducted unto *Judea*, returned into their Country, and were after baptized by *Thomas*. From whence about three hundred years after, by *Helena* the Empreſs their bodies were tranſlated to *Conſtantinople*. From thence by *Euſtatius* unto *Millain*, and at laſt by *Renatus* the Biſhop unto *Collein*: where they are believed at preſent to remain, their monuments ſhewn unto ſtrangers, and having loſt their *Arabian* Titles, are crowned Kings of *Collein*.

And why of *Collein*.

CHAP. IX.

Of the food of John Baptiſt, *Locuſts and Wild-honey.*

COncerning the food of *John Baptiſt* in the wilderneſs, Locuſts and Wild-honey, leſt popular opiniatrity ſhould ariſe, we will deliver the chief opinions. The firſt conceiveth the Locuſts here mentioned to be that fruit which the Greeks name κερατιον, mentioned by *Luke* in the diet of the Prodigal Son, the Latins *Siliqua*, and ſome *Panis Sancti Johannis*; included in a broad Cod, and indeed a taſte almoſt as pleaſant as Honey. But this opinion doth not ſo truly impugn that of the Locuſts: and might rather call into controverſie the meaning of Wild-honey.

The ſecond affirmeth that they were the tops or tender crops of trees: for ſo *Locuſta* alſo ſignifieth: which conceit is plauſible in Latin, but will not hold in Greek, wherein the word is ἀκρίδες, except for ἀκρίδες, we read ἀκρόδρυα, or ἀκρέμονες, which ſignifie the extremities of Trees, of which belief have divers been: more confidently *Iſidore Peleuſiota*, who in his Epiſtles plainly affirmeth they think unlearnedly who are of another belief. And this ſo wrought upon *Baronius*, that he concludeth in neutrality; *Hæc cùm ſcribat Iſidorus, definiendum nobis non eſt, & totum relinquimus lectoris arbitrio; nam conſtat Græcam dictionem* ἀκρίδες *& Locuſtam, inſecti genus, & arborum ſummitates ſignificare. Sed fallitur*, ſaith *Montacutius*, *nam conſtat contrarium,* Ἀκρίδα *apud nullum authorem claſſicum* Ἀκρόδρυα *ſignificare.* But above all *Paracelſus* with moſt animoſity promoteth this opinion, and in his book *de melle*, ſpareth not his Friend *Eraſmus*. *Hoc à nonnullis ita explicatur ut dicant Locuſtas aut cicadas Johanni pro cibo fuiſſe; ſed hi ſtultitiam diſſimulare non poſſunt, veluti Jeronymus, Eraſmus, & alii Prophetæ Neoterici in Latinitate immortui.*

Opinions concerning ἀκρίδες, or the Locuſts of S. *John* Baptiſt.

A third affirmeth that they were properly Locuſts: that is, a ſheath-winged and ſix-footed inſect, ſuch as is our Graſhopper. And this opinion ſeems more probable than the other. For beſide the authority of *Origen*, *Jerom*, *Chryſoſtom*, *Hilary* and *Ambroſe* to confirm it: this is the proper ſignification of the word, thus uſed in Scripture by the Septuagint, Greek vocabularies thus expound it. *Suidas* on the word Ἀκρὶς obſerves it to be that animal whereon the Baptiſt fed in the deſert; in this ſenſe the word is uſed by *Ariſtotle*, *Dioſcorides*, *Galen*, and ſeveral humane

The more probable what.

mane Authors. And laſtly, there is no abſurdity in this interpretation, or any ſolid reaſon why we ſhould decline it, it being a food permitted unto the *Jews*, whereof four kinds are reckoned up among clean meats. Beſide, not only the *Jews*, but many other Nations long before and ſince, have made an uſual food thereof. That the *Æthiopians*, *Mauritanians* and *Arabians* did commonly eat them, is teſtified by *Diodorus*, *Strabo*, *Solinus*, *Ælian* and *Pliny*: that they ſtill feed on them, is confirmed by *Leo*, *Cadamuſtus* and others. *John* therefore, as our Saviour ſaith, *came neither eating nor drinking*; that is, far from the diet of *Jeruſalem* and other Riotous places: but fared courſly and poorly, according unto the apparel he wore, that is of Camels hair; the place of his abode, the wilderneſs; and the doctrine he preached, humiliation and repentance.

CHAP. X.

That John *the Evangeliſt ſhould not die.*

THE conceit of the long-living, or rather not dying of *John* the Evangeliſt, although it ſeem inconſiderable, and not much weightier than that of *Joſeph* the wandring *Jew*: yet being deduced from Scripture, and abetted by Authors of all times, it ſhall not eſcape our enquiry. It is drawn from the ſpeech of our Saviour unto *Peter* after the prediction of his Martyrdom;

John. 21. *Peter ſaith unto Jeſus, Lord what ſhall this man do? Jeſus ſaith unto him, If I will that he tarry until I come, what is that to thee? Follow thou me. Then went this ſaying abroad among the brethren, that this diſciple ſhould not die.*

Now the belief hereof hath been received either groſly and in the general, that is, not diſtinguiſhing the manner or particular way of this continuation, in which ſenſe probably the groſſer and undiſcerning party received it: Or more diſtinctly, apprehending the manner of his immortality; that is, that *John* ſhould never properly die, but be tranſlated into Paradiſe, there to remain with *Enoch* and *Elias* until about the coming of Chriſt; and ſhould be ſlain with them under Antichriſt, according to that of the Apocalypſe, *I will give power unto my two witneſſes, and they ſhall propheſie a thouſand two hundred and threeſcore days, cloathed in ſack-cloth. And when they ſhall have finiſhed their Teſtimony, the beaſt that aſcendeth out of the bottomleſs pit, ſhall make war againſt them, and ſhall overcome them, and kill them.* Hereof, as *Baronius* obſerveth, within three hundred years after Chriſt, *Hippolytus* the Martyr was the firſt aſſertor, but hath been maintained by *Metaphraſtes*, by *Freculphus*, but eſpecially by *Georgius Trapezuntius*, who hath expreſly treated upon this Text, and although he lived but in the laſt Century, did ſtill affirm that *John* was not yet dead.

The ſame is alſo hinted by the learned Italian Poet *Dante*, who in his Poetical ſurvey of Paradiſe, meeting with the ſoul of St. *John*, and deſiring to ſee his body; received anſwer from him, that his body was in earth, and there ſhould remain with other bodies until the number of the bleſſed were accompliſhed.

In terra è terra il mio corpo, & ſaragli
Tanto cogli altri, che l' numero noſtro
Con l' eterno propoſito s' agguagli.

As for the groſs opinion that he ſhould not die, it is ſufficiently refuted by that which firſt occaſioned it, that is, the Scripture it ſelf, and no further off, than the very ſubſequent verſe: *Yet Jeſus ſaid not unto him, he ſhould not die, but if I will that he tarry till I come, What is that to thee?* And this

this was written by *John* himself, whom the opinion concerned; and as is conceived, many years after, when *Peter* had suffered and fulfilled the prophecy of Christ.

For the particular conceit, the foundation is weak, nor can it be made out from the Text alledged in the Apocalyse: for beside that therein two persons are only named, no mention is made of *John*, a third Actor in this Tragedy. The same is also overthrown by History, which recordeth not only the death of *John*, but assigneth the place of his burial, that is, *Ephesus*, a City in *Asia minor*, whither after he had been banished into *Patmos* by *Domitian*, he returned in the reign of *Nerva*, there deceased, and was buried in the days of *Trajan*. And this is testified by *Jerom*, by *Tertullian*, by *Chrysostom* and *Eusebius*, in whose days his Sepulchre was to be seen; and by a more ancient Testimony alledged also by him, that is, of *Polycrates* Bishop of *Ephesus*, not many successions after *John*; whose words are these in an Epistle unto *Victor* Bishop of *Rome*, *Johannes ille qui supra pectus Domini recumbebat, Doctor optimus, apud Ephesum dormivit.* Many of the like nature are noted by *Baronius*, *Jansenius*, *Estius*, *Lipellous*, and others.

The death of S. *John* the Evangelist, where and when. *De Scriptor. Eccleiast. De anima.*

Now the main and primitive ground of this error, was a gross mistake in the words of Christ, and a false apprehension of his meaning; understanding that positively which was but conditionally expressed, or receiving that affirmatively which was but concessively delivered. For the words of our Saviour run in a doubtful strain, rather reprehending than satisfying the curiosity of *Peter*; as though he should have said, Thou hast thy own doom, why enquirest thou after thy Brother's? What relief unto thy affliction, will be the society of anothers? Why pryest thou into the secrets of Gods will? If he stay until I come, what concerneth it thee, who shalt be sure to suffer before that time? And such an answer probably he returned, because he fore-knew *John* should not suffer a violent death, but go unto his grave in peace. Which had *Peter* assuredly known, it might have cast some water on his flames, and smothered those fires which kindled after unto the honour of his Master.

Now why among all the rest *John* only escaped the death of a Martyr, the reason is given; because all others fled away or withdrew themselves at his death, and he alone of the Twelve beheld his passion on the Cross: Wherein notwithstanding, the affliction that he suffered could not amount unto less than Martyrdom: for if the naked relation, at least the intentive consideration of that Passion, be able still, and at this disadvantage of time, to rend the hearts of pious Contemplators; surely the near and sensible vision thereof must needs occasion Agonies beyond the comprehension of flesh; and the trajections of such an object more sharply pierce the Martyred Soul of *John*, than afterward did the nails the crucified body of *Peter*.

Of all the Apostles St. *John* only is thought to have suffered a natural death: And why?

Again, They were mistaken in the Emphatical apprehension, placing the consideration upon the words, *If I will*: whereas it properly lay in these, *when I come*. Which had they apprehended as some have since, that is, not for his ultimate and last return, but his coming in Judgment and destruction upon the *Jews*; or such a coming, as it might be said, that that generation should not pass before it was fulfilled; they needed not, much less need we, suppose such diuturnity. For after the death of *Peter*, *John* lived to behold the same fulfilled by *Vespasian*: nor had he then his *Nunc dimittis*, or went out like unto *Simeon*; but old in accomplisht obscurities, and having seen the expire of *Daniels* prediction, as some conceive, he accomplished his Revelation.

But besides this original and primary foundation, divers others have made impressions according unto different ages and persons by whom they were received. For some established the conceit in the disciples and brethren, which were contemporary unto him, or lived about the same time with him; and this was first the extraordinary affection our Saviour bare unto this disciple, who hath the honour to be called the disciple whom Jesus loved. Now from hence they might be apt to believe their Master would dispense with his death, or suffer him to live to see him return in glory, who was

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the only Apoſtle that beheld him to die in diſhonour. Another was the belief and opinion of thoſe times, that Chriſt would ſuddenly come; for they held not generally the ſame opinion with their ſucceſſors, or as deſcending ages after ſo many Centuries; but conceived his coming would not be long after his paſſion, according unto ſeveral expreſſions of our Saviour groſly underſtood, and as we find the ſame opinion not long after reprehended by S. *Paul*: and thus conceiving his coming would not be long, they might be induced to believe his Favorite ſhould live unto it. Laſtly, the long life of *John* might much advantage this opinion; for he ſurvived the other twelve, he was aged 22 years when he was called by Chriſt, and 25 that is the age of Prieſthood at his death, and lived 93 years, that is 68 after his Saviour, and died not before the ſecond year of *Trajan*. Now having out-lived all his Fellows, the world was confirmed he might live ſtill, and even unto the coming of his Maſter.

2 Theſ. 2.

Saint *John*, how long ſurviving our B. Saviour.

The grounds which promoted it in ſucceeding ages, were eſpecially two. The firſt his eſcape of Martyrdom: for whereas all the reſt ſuffered ſome kind of forcible death, we have no hiſtory that he ſuffered any; and men might think he was not capable thereof: For as Hiſtory informeth, by the command of *Domitian* he was caſt into a Caldron of burning oyl, and came out again unſindged. Now future ages apprehending he ſuffered no violent death, and finding alſo the means that tended thereto could take no place; they might be confirmed in their opinion, that death had no power over him, that he might live always who could not be deſtroyed by fire, and was able to reſiſt the fury of that element which nothing ſhall reſiſt. The ſecond was a corruption, crept into the Latin Text, reading for *Si*, *Sic eum manere volo*; whereby the anſwer of our Saviour becometh poſitive, or that he will have it ſo; which way of reading was much received in former ages, and is ſtill retained in the vulgar Tranſlation; but in the Greek and original the word is ἐὰν, ſignifying *ſi* or *if*, which is very different from οὕτω, and cannot be tranſlated for it: and anſwerable hereunto is the tranſlation of *Junius*, and that alſo annexed unto the Greek by the authority of *Sixtus Quintus*.

The third confirmed it in ages farther deſcending, and proved a powerful argument unto all others following; becauſe in his Tomb at *Epheſus* there was no corps or relique thereof to be found; whereupon aroſe divers doubts, and many ſuſpicious conceptions; ſome believing he was not buried, ſome that he was buried but riſen again; others that he deſcended alive into his Tomb, and from thence departed after. But all theſe proceeded upon unveritable grounds, as *Baronius* hath obſerved; who alledgeth a letter of *Celeſtine* Biſhop of *Rome*, unto the Council of *Epheſus*, wherein he declareth the reliques of *John* were highly honoured by that City; and a paſſage alſo of *Chryſoſtome* in the Homilies of the Apoſtles, That *John* being dead, did cures in *Epheſus*, as though he were ſtill alive. And ſo I obſerve that *Eſtius* diſcuſſing this point, concludeth hereupon, *Quòd corpus ejus nunquam reperiatur, hoc non dicerent ſi veterum ſcripta diligenter perluſtraſſent.*

Now that the firſt ages after Chriſt, thoſe ſucceeding, or any other ſhould proceed into opinions ſo far divided from reaſon, as to think of immortality after the fall *Adam*, or conceit a man in theſe later times ſhould out-live our fathers in the firſt; although it ſeem very ſtrange, yet is it not incredible. For the credulity of men hath been deluded into the like conceits; and as *Irenæus* and *Tertullian* mention, one *Menander* a *Samaritan* obtained belief in this very point; whoſe doctrin it was, that death ſhould have no power on his diſciples, and ſuch as received his baptiſm ſhould receive immortality therewith. 'Twas ſurely an apprehenſion very ſtrange; nor uſually falling either from the abſurdities of Melancholy or vanities of ambition. Some indeed have been ſo affectedly vain, as to counterfeit Immortality, and have ſtoln their death, in a hope to be eſteemed immortal; and others have conceived themſelves dead: but ſurely few or none have faln upon ſo bold an errour, as not to think that they could die at all. The reaſon of thoſe mighty ones, whoſe ambition could ſuffer them to be called gods, would never be flattered into immortality; but the proudeſt thereof have by the daily dictates of corruption convinced

vinced the impropriety of that appellation. And surely although delusion may run high, and possible it is that for a while a man may forget his nature, yet cannot this be durable. For the inconcealable imperfections of our selves, or their daily examples in others, will hourly prompt us our corruption, and loudly tell us we are the Sons of Earth.

CHAP. XI.

More compendiously of sons others.

MAny others there are which we resign unto Divinity, and perhaps deserve not controversie. Whether *David* were punished only for pride of heart in numbering the people, as most do hold, or whether as *Josephus* and many maintain, he suffered also for not performing the Commandment of God concerning capitation; That when the people were numbred, for every head they should pay unto God a shekel, we shall not here contend. *Exod.* 30. Surely, if it were not the occasion of this plague, we must acknowledge the omission thereof was threatned with that punishment, according to the words of the Law. *When thou takest the sum of the children of Israel, then shall they give every man a ransom for his Soul unto the Lord, that there be no plague amongst them.* Now how deeply hereby God was defrauded in the time of *David*, and opulent State of *Israel*, will easily appear by the summs of former lustrations. *Exod.* 38. For in the first, the silver of them that were numbred was an hundred Talents, and a thousand seven hundred threescore and fifteen shekels; a Bekah for every man, that is, half a shekel, after the shekel of the Sanctuary; for every one from twenty years old and upwards, for six hundred thousand, and three thousand and five hundred and fifty men. Answerable whereto we read in *Josephus*, *Vespasian* ordered that every man of the *Jews* should bring into the Capitol two dragms; which amounts unto fifteen pence, or a quarter of an ounce of silver with us: and is equivalent unto a Bekah, or half a shekel of the Sanctuary. For an Attick dragm is seven pence halfpeny or a quarter of a shekel, and a *didrachmum* or double dragm, is the word used for Tribute money, or half a shekel; and a *stater* the money found in the fishes mouth was two *Didrachmums*, or a whole shekel, and tribute sufficient for our Saviour and for *Peter*. What the Attick dragm is. What the *didrachmum* and the *stater*, *Mat.* 17. 27.

We will not question the Metamorphosis of *Lot's* wife, or whether she were transformed into a real *statua* of Salt: though some conceive that expression Metaphorical, and no more thereby than a lasting and durable column, according to the nature of Salt, which admitteth no corruption: in which sense the Covenant of God is termed a Covenant of Salt; and it is also said, *God gave the Kingdom unto David for ever, or by a Covenant of Salt.*

That *Absalom* was hanged by the hair of the head, and not caught up by the neck, as *Josephus* conceiveth, and the common argument against long hair affirmeth, we are not ready to deny. Although I confess a great and learned party there are of another opinion; although if he had his Morion or Helmet on, I could not well conceive it; although the translation of *Jerom* or *Tremelius* do not prove it, and our own seems rather to overthrow it.

That *Judas* hanged himself, much more, that he perished thereby, we shall not raise a doubt. Although *Jansenius* discoursing the point, produceth the testimony of *Theophylact* and *Euthymius*, that he died not by the Gallows, but under a cart wheel; and *Baronius* also delivereth, this was the opinion of the *Greeks*, and derived as high as *Papias*, one of the Disciples of *John*. Although also how hardly the expression of *Matthew* is reconcilable unto that of *Peter*, and that he plainly hanged himself, with that, that falling head-long he burst asunder in the midst, with many other, the learned *Grotius* plainly

How *Judas* might die.

plainly doth acknowledge. And lastly, Although as he also urgeth, the word ἀπήγξατο in *Matthew*, doth not only signifie suspension or pendulous illaqueation, as the common picture describeth it, but also suffocation, strangulation or interception of breath, which may arise from grief, despair, and deep dejection of spirit, in which sense it is used in the History of *Tobit* concerning *Sara*, ἐλυπήθη σφόδρα ὥστε ἀπάγξασθαι, *Ita tristata est ut strangulatione premeretur*, saith *Junius*; and so might it happen from the horrour of mind unto *Judas*. So do many of the *Hebrews* affirm, that *Achitophel* was also strangled, that is, not from the rope, but passion. For the Hebrew and Arabick word in the Text, not only signifies suspension, but indignation, as *Grotius* hath also observed.

Strangulat incisus dolor.

Many more there are of indifferent truths, whose dubious expositions, worthy Divines and Preachers do often draw into wholesome and sober uses, whereof we shall not speak; with industry we decline such Paradoxes, and peaceably submit unto their received acceptions.

CHAP. XII.

Of the Cessation of Oracles.

THat Oracles ceased or grew mute at the coming of Christ, is best understood in aqualified sense, and not without all latitude, as though precisely there were none after, nor any decay before. For (what we must confess unto relations of Antiquity) some pre-decay is observable from that of *Cicero*, urged by *Baronius*; *Cur isto modo jam oracula Delphis non eduntur, non modò nostra ætate, sed jam diu, ut nihil possit esse contemptius.* That during his life they were not altogether dumb, is deduceable from *Suetonius* in the life of *Tiberius*, who attempting to subvert the Oracles adjoyning unto *Rome*, was deterred by the Lots or chances which were delivered at *Præneste*. After his death we meet with many; *Suetonius* reports, that the Oracle of *Antium* forewarned *Caligula* to beware of *Cassius*, who was one that conspired his death. *Plutarch* enquiring why the Oracles of *Greece* ceased, excepteth that of *Lebadia*: and in the same place *Demetrius* affirmeth the Oracles of *Mopsus* and *Amphilochus* were much frequented in his days. In brief, Histories are frequent in examples, and there want not some even to the reign of *Julian*.

What therefore may consist with History, by cessation of Oracles, with *Montacutius*, we may understand their intercision, not abscission or consummate desolation; their rare delivery, not total dereliction: and yet in regard of divers Oracles, we may speak strictly, and say there was a proper cessation. Thus may we reconcile the accounts of times, and allow those few and broken divinations, whereof we read in story and undeniable Authors. For that they received this blow from Christ, and no other causes alledged by the Heathens, from oraculous confession they cannot deny; whereof upon record there are some very remarkable. The first that Oracle of *Delphos* delivered unto *Augustus*,

Me puer Hebræus Divos Deus ipse gubernans
Cedere sede jubet, tristémq; redire sub orcum;
Aris ergo dehinc tacitus discedito nostris.

An Hebrew child, a God all gods excelling,
To Hell again commands me from this dwelling.
Our Altars leave in silence, and no more
A Resolution e're from hence implore.

A second recorded by *Plutarch*, of a voice that was heard to cry unto Mariners at the Sea, *Great Pan is dead*; which is a relation very remarkable, and may be read in his defect of Oracles. A third reported by *Eusebius* in the life of his magnified *Constantine*, that about that time *Apollo* mourned, declaring his Oracles were false, and that the righteous upon earth did hinder him from speaking truth. And a fourth related by *Theodoret*, and delivered by *Apollo Daphneus* unto *Julian* upon his *Persian* expedition, that he should remove the bodies about him before he could return an answer, and not long after his Temple was burnt with lightning.

All which were evident and convincing acknowledgements of that Power which shut his lips, and restrained that delusion which had reigned so many Centuries. But as his malice is vigilant, and the sins of men do still continue a toleration of his mischiefs, he resteth not, nor will he ever cease to circumvent the Sons of the first deceived. And therefore expelled from Oracles and solemn Temples of delusion, he runs into corners, exercising minor trumperies, and acting his deceits in Witches, Magicians, Diviners, and such inferiour seducers. And yet (what is deplorable) while we apply our selves thereto, and affirming that God hath left to speak by his Prophets, expect in doubtful matters a resolution from such spirits, while we say the Devil is mute, yet confess that these can speak; while we deny the substance, yet practise the effect, and in the denied solemnity maintain the equivalent efficacy: in vain we cry that Oracles are down; *Apollo*'s Altar still doth smoak; nor is the fire of *Delphos* out unto this day.

The Devils retreat when expelled the Oracles.

Impertinent it is unto our intention to speak in general of Oracles, and many have well performed it. The plainest of others was that of *Apollo Delphicus* recorded by *Herodotus*, and delivered unto *Crœsus*; who as a trial of their omniscience sent unto distant Oracles; and so contrived with the Messengers, that though in several places, yet at the same time they should demand what *Crœsus* was then a doing. Among all others the Oracle of *Delphos* only hit it, returning answer, he was boyling a Lamb with a Tortoise, in a brazen vessel, with a cover of the same metal. The stile is haughty in Greek, though somewhat lower in Latine.

Æquoris est spatium & numerus mihi notus arenæ,
Mutum percipio, fantis nihil audio vocem.
Venit ad hos sensus nidor testudinis acris,
Quæ semel agninâ coquitur cum carne labete,
Aere infra strato, & stratum cui desuper æs est.

I know the space of Sea, the number of the sand,
I hear the silent, mute I understand.
A tender Lamb joined with Tortoise flesh,
Thy Master King of *Lydia* now doth dress.
The scent thereof doth in my nostrils hover,
From brazen pot closed with brazen cover.

Hereby indeed he acquired much wealth and more honour, and was reputed by *Crœsus* as a Deity: and yet not long after, by a vulgar fallacy he deceived his favourite and greatest friend of Oracles into an irreparable overthrow by *Cyrus*. And surely the same success are likely all to have, that rely or depend upon him. 'Twas the first play he practised on mortality; and as time hath rendred him more perfect in the Art, so hath the inveterateness of his malice more ready in the Execution. 'Tis therefore the soveraign degree of folly, and a crime not only against God, but also our own reasons, to expect a favour from the Devil; whose mercies are more cruel than those of *Polyphemus*; for he devours his favourites first, and the nearer a man approacheth, the sooner he is scorched by *Moloch*. In brief, his favours are deceitful and double-headed, he doth apparent good, for real and convincing evil after it; and exalteth us up to the top of the Temple, but to tumble us down from it.

CHAP. XIII.

Of the death of Ariſtotle.

THAT *Ariſtotle* drowned himſelf in *Euripus*, as deſpairing to reſolve the cauſe of its reciprocation, or ebb and flow ſeven times a day, with this determination, *Si quidem ego non capio te, tu capies me*, was the aſſertion of *Procopius*, *Nazianzen*, *Juſtin Martyr*, and is generally believed among us. Wherein, becauſe we perceive men have but an imperfect knowledge, ſome conceiving *Euripus* to be a River, others not knowing where or in what part to place it; we firſt advertiſe, it generally ſignifieth any ſtrait, fret, or channel of the Sea, running between two ſhoars, as *Julius Pollux* hath defined it; as we read of *Euripus Helleſpontiacus*, *Pyrrhæus*, and this whereof we treat, *Euripus Euboicus* or *Chalcidicus*, that is, a narrow paſſage of Sea dividing *Attica*, and the Iſland of *Eubœa*, now called *Golfo de Negroponte*, from the name of the Iſland and chief City thereof; famous in the wars of *Antiochus*, and taken from the *Venetians* by *Mahomet* the Great.

What an *Euripus* is generally.

Now that in this *Euripe* or fret of *Negropont*, and upon the occaſion mentioned, *Ariſtotle* drowned himſelf, as many affirm, and almoſt all believe, we have ſome room to doubt. For without any mention of this, we find two ways delivered of his death by *Diogenes Laertius* who expreſly treateth thereof; the one from *Eumolus* and *Phavorinus*, that being accuſed of impiety for compoſing an Hymn unto *Hermias* (upon whoſe Concubine he begat his ſon *Nicomachus*) he withdrew into *Chalcis*, where drinking poiſon he died; the Hymn is extant in *Laertius*, and the fifteenth book of *Athenæus*. Another by *Apollodorus*, that he died at *Chalcis* of a natural death and languiſhment of ſtomach, in his ſixty third, or great Climacterical year; and anſwerable hereto is the account of *Suidas* and *Cenſorinus*. And if that were clearly made out, which *Rabbi Ben Joſeph* affirmeth, he found in an *Egyptian* book of *Abraham Sapiens Perizol*; that *Ariſtotle* acknowledged all that was written in the Law of *Moſes*, and became at laſt a Proſelyte; it would alſo make improbable this received way of his death.

Touching the death of *Ariſtotle*.

Licetus *de quæſtitis. Epiſt.*

Again, Beſide the negative of Authority, it is alſo deniable by reaſon; nor will it be eaſie to obtrude ſuch deſperate attempts upon *Ariſtotle*, from unſatisfaction of reaſon, who ſo often acknowledged the imbecillity thereof. Who in matters of difficulty, and ſuch which were not without abſtruſities, conceived it ſufficient to deliver conjecturalities. And ſurely he that could ſometimes ſit down with high improbabilities, that could content himſelf, and think to ſatisfie others, that the variegation of Birds was from their living in the Sun, or erection made by delibration of the Teſticles; would not have been dejected unto death with this. He that was ſo well acquainted with ἢ ὅτι, and πότερον *utrum*, and *An Quia*, as we obſerve in the Queries of his Problems; with ἴσως and ὅτι τὸ πολὺ, *fortaſſe* and *plerumque*, as is obſervable through all his Works; had certainly reſted with probabilities, and glancing conjectures in this: Nor would his reſolutions have ever run into that mortal *Antanaclaſis*, and deſperate piece of Rhetorick, to be compriz'd in that he could not comprehend. Nor is it indeed to be made out, that he ever endeavoured the particular of *Euripus*, or ſo much as to reſolve the ebb and flow of the Sea. For, as *Vicomercatus* and others obſerve, he hath made no mention hereof in his Works, although the occaſion preſent it ſelf in his Meteors, wherein he diſputeth the affections of the Sea: nor yet in his Problems, although in the twenty third Section, there be no leſs than one and forty Queries of the Sea. Some mention there is indeed in a Work of the propriety of Elements, aſcribed unto *Ariſtotle*: which notwithſtanding is not reputed genuine, and was perhaps the ſame whence this was urged by *Plutarch*.

De placitis Philoſophorum.

Laſtly,

Laſtly, the thing it ſelf whereon the opinion dependeth, that is, the variety of the flux and the reflux of *Euripus*, or whether the ſame do ebb and flow ſeven times a day, is not incontrovertible. For though *Pomponius Mela*, and after him *Solinus* and *Pliny* have affirmed it; yet I obſerve *Thucydides*, who ſpeaketh often of *Eubœa*, hath omitted it. *Pauſanius* an ancient Writer, who hath left an exact deſcription of *Greece*, and in as particular a way as *Leandro* of *Italy*, or *Camden* of great *Britain*, deſcribing not only the Country Towns, and Rivers; but Hills, Springs and Houſes, hath left no mention hereof. *Æſchines* in *Cteſiphon* only alludeth unto it; and *Strabo* that accurate Geographer ſpeaks warily of it, that is, ὡς φασι, and as men commonly reported. And ſo doth alſo *Maginus*, *Velocis ac varii fluctûs eſt mare, ubi quater in die, aut ſepties, ut alii dicunt, reciprocantur æſtus.* *Botero* more plainly, *Il mar creſce è cala con un impeto mirabile quatra volte il di, ben che communimente ſi dica ſette volte*, &c. This Sea with wondrous impetuoſity ebbeth and floweth four times a day, although it be commonly ſaid ſeven times; and generally opinioned, that *Ariſtotle* deſpairing of the reaſon, drowned himſelf therein. In which deſcription by four times a day, it exceeds not in number the motion of other Seas, taking the words properly, that is, twice ebbing and twice flowing in four and twenty hours. And is no more than what *Thomaſo Porrchachi* affirmeth in his deſcription of famous Iſlands, that twice a day it hath ſuch an impetuous flood, as is not without wonder. *Livy* ſpeaks more particularly, *Haud facile infeſtior claſſi ſtatio eſt & fretum ipſum Euripi, non ſepties die (ſicut fama fert) temporibus certis reciprocat, ſed temerè in modum venti, nunc hunc nunc illuc verſo mari, velut monte præcipiti devolutus torrens rapitur.* There is hardly a worſe harbour, the fret or chanel of *Euripus* not certainly ebbing or flowing ſeven times a day, according to common report: but being uncertainly, and in the manner of a wind carried hither and thither, is whirled away as a torrent down a hill. But the experimental teſtimony of *Gillius* is moſt conſiderable of any: who having beheld the courſe thereof, and made enquiry of Millers that dwelt upon its ſhore, received anſwer, that it ebbed and flowed four times a day, that is, every ſix hours, according to the Law of the Ocean: but that indeed ſometimes it obſerved not that certain courſe. And this irregularity, though ſeldom happening, together with its unruly and tumultuous motion, might afford a beginning unto the common opinion. Thus may the expreſſion in *Cteſiphon* be made out: And by this may *Ariſtotle* be interpreted, when in his Problems he ſeems to borrow a Metaphor from *Euripus*: while in the five and twentieth Section he enquireth, why in the upper parts of houſes the Air doth Euripize, that is, is whirled hither and thither.

A later and experimental teſtimony is to be found in the Travels of Monſieur *Duloir*; who about twenty years ago, remained ſometime at *Negroponte*, or old *Chalcis*, and alſo paſſed and repaſſed this *Euripus*; who thus expreſſeth himſelf. I wonder much at the Error concerning the flux and reflux of *Euripus*; and I aſſure you that opinion is falſe. I gave a Boat-man a Crown, to ſet me in a convenient place, where for a whole day I might obſerve the ſame. It ebbeth and floweth by ſix hours, even as it doth at *Venice*, but the courſe thereof is vehement.

Now that which gave life unto the aſſertion, might be his death at *Chalcis*, the chief City of *Eubœa*, and ſeated upon *Euripus*, where 'tis confeſſed by all he ended his days. That he emaciated and pined away in the too anxious enquiry of its reciprocations, although not drowned therein, as *Rhodiginus* relateth, ſome conceived, was a half confeſſion thereof not juſtifiable from Antiquity. Surely the Philoſophy of flux and reflux was very imperfect of old among the Greeks and Latins; nor could they hold a ſufficient theory thereof, who only obſerved the Mediterranean, which in ſome places hath no ebb, and not much in any part. Nor can we affirm our knowledg is at the height, who have now the Theory of the Ocean and narrow Seas beſide. While we refer it unto the Moon, we give ſome ſatisfaction for the Ocean, but no general ſalve for Creeks, and Seas which know no flood; nor reſolve why it flows three or four foot at *Venice* in the bottom of the

Gulph, yet ſcarce at all at *Ancona*, *Durazzo*, or *Corcyra*, which lye but by the way. And therefore old abſtruſities have cauſed new inventions; and ſome from the Hypotheſes of *Copernicus*, or the Diurnal and Annual motion of the earth, endeavour to ſalve the flows and motions of theſe Seas, illuſtrating the ſame by water in a boal, that riſing or falling to either ſide, according to the motion of the veſſel; the conceit is ingenious, ſalves ſome doubts, and is diſcovered at large by *Galileo*.

Rog. Bac. Doct. Cabeus Met. 2. How the Moon may cauſe the ebbing and flowing of the Sea.

But whether the received principle and undeniable action of the Moon may not be ſtill retained; although in ſome difference of application, is yet to be perpended; that is, not by a ſimple operation upon the ſurface or ſuperior parts, but excitation of the nitro-ſulphureous ſpirits, and parts diſpoſed to intumeſcency at the bottom; not by attenuation of the upper part of the Sea, (whereby Ships would draw more water at the flow than at the ebb) but inturgeſcencies cauſed firſt at the bottom, and carrying the upper part before them; ſubſiding and falling again, according to the motion of the Moon from the Meridian, and languor of the exciting cauſe: and therefore Rivers and Lakes who want theſe fermenting parts at the bottom, are not excited unto æſtuations; and therefore ſome Seas flow higher than others, according to the Plenty of theſe ſpirits, in their ſubmarine conſtitutions. And therefore alſo the periods of flux and reflux are various, nor their increaſe or decreaſe equal: according to the temper of the terreous parts at the bottom: who as they are more hardly or eaſily moved, do variouſly begin, continue or end their intumeſcencies.

Why Rivers and Lakes ebb and flow not. Why ſome Seas flow higher than others, and continue longer.

Whence the violent flows proceed in ſome Æſtuaries and Rivers.

From the peculiar diſpoſition of the earth at the bottom, wherein quick excitations are made, may ariſe thoſe Agars and impetuous flows in ſome Æſtuaries and Rivers, as is obſerved about *Trent* and *Humber* in *England*; which may alſo have ſome effect in the boiſterous tides of *Euripus*, not only from ebullitions at the bottom, but alſo from the ſides and lateral parts, driving the ſtreams from either ſide, which ariſe or fall according to the motion in thoſe parts, and the intent or remiſs operation of the firſt exciting cauſes, which maintain their activities above and below the Horizon; even as they do in the bodies of plants and animals, and in the commotion of Catarrhs.

How therefore *Ariſtotle* died, what was his end, or upon what occaſion, although it be not altogether aſſured, yet that his memory and worthy name ſhall live, no man will deny, nor grateful Scholar doubt. And if according to the Elogy of *Solon*, a man may be only ſaid to be happy after he is dead, and ceaſeth to be in the viſible capacity of beatitude; or if according unto his own Ethicks, ſenſe is not eſſential unto felicity, but a man may be happy without the apprehenſion thereof: ſurely in that ſenſe he is pyramidally happy; nor can he ever periſh but in the Euripe of Ignorance, or till the Torrent of Barbariſm overwhelmeth all.

A like conceit there paſſeth of *Meliſigenes*, *aliàs Homer*, the Father Poet, that he pined away upon the Riddle of the Fiſhermen. But *Herodotus* who wrote his life hath cleared this point; delivering, that paſſing from *Samos* unto *Athens*, he went ſick aſhore upon the Iſland *Ios*, where he died, and was ſolemnly Interred upon the Sea-ſide; and ſo decidingly concludeth, *Ex hac ægritudine extremum diem clauſit Homerus in Io, non, ut arbitrantur aliqui, Ænigmatis perplexitate enectus, ſed morbo.*

Homer's Death.

CHAP.

CHAP. XIV.

Of the Wiſh of Philoxenus.

THAT Relation of *Ariſtotle*, and conceit generally received concerning *Philoxenus*, who wiſhed the neck of a Crane, that thereby he might take more pleaſure in his meat, although it paſs without exception, upon enquiry I find not only doubtful in the ſtory, but abſurd in the deſire or reaſon alledged for it. For though his Wiſh were ſuch as is delivered, yet had it not perhaps that end, to delight his guſt in eating; but rather to obtain advantage thereby in ſinging, as is declared by *Mirandula*. *Ariſtotle* (ſaith he) in his Ethicks and Problems, accuſeth *Philoxenus* of ſenſuality, for the greater pleaſure of guſt deſiring the neck of a Crane; which deſire of his, aſſenting unto *Ariſtotle*, I have formerly condemned: But ſince I perceive that *Ariſtotle* for this accuſation hath been accuſed by divers Writers. For *Philoxenus* was an excellent Muſician, and deſired the neck of a Crane, not for any pleaſure at meat; but fancying thereby an advantage in ſinging or warbling, and dividing the notes in muſick. And many Writers there are which mention a Muſician of that name, as *Plutarch* in his Book againſt Uſury; and *Ariſtotle* himſelf in the Eighth of his Politicks, ſpeaks of one *Philoxenus* a Muſician, that went off from the Dorick Dithyrambicks unto the Phrygian Harmony.

Again, Be the ſtory true or falſe, rightly applied or not, the intention is not reaſonable, and that perhaps neither one way nor the other. For if we rightly conſider the Organ of taſt, we ſhall find the length of the neck to conduce but little unto it. For the tongue being the inſtrument of taſt, and the tip thereof the moſt exact diſtinguiſher, it will not advantage the guſt to have the neck extended: Wherein the Gullet and conveying parts are only ſeated, which partake not of the nerves of guſtation, or appertaining unto ſapor, but receive them only from the ſixth pair; whereas the nerves of taſt deſcend from the third and fourth propagations, and ſo diffuſe themſelvs into the tongue. And therefore Cranes, Herns and Swans have no advantage in taſte beyond Hawks, Kites, and others of ſhorter necks.

Nor, if we conſider it, had Nature reſpect unto the taſte in the different contrivance of necks, but rather unto the parts contained, the compoſure of the reſt of the body, and the manner whereby they feed. Thus animals of long legs, have generally long necks; that is, for the conveniency of feeding, as having a neceſſity to apply their mouths unto the earth. So have Horſes, Camels, Dromedaries long necks, and all tall animals, except the Elephant, who in defect thereof is furniſhed with a Trunk, without which he could not attain the ground. So have Cranes, Herns, Storks and Shovelards long necks: and ſo even in Man, whoſe figure is erect, the length of the neck followeth the proportion of other parts: and ſuch as have round faces or broad cheſts and ſhoulders, have very ſeldom long necks. For, the length of the face twice exceedeth that of the neck, and the ſpace betwixt the throat-pit and the navel, is equal unto the circumference thereof. Again, animals are framed with long necks, according unto the courſe of their life or feeding: ſo many with ſhort legs have long necks, becauſe they feed in the water, as Swans, Geeſe, Pelicans, and other fin-footed animals. But Hawks and birds of prey have ſhort necks and truſſed legs; for that which is long is weak and flexible, and a ſhorter figure is beſt accommodated unto that intention. Laſtly, the necks of animals do vary, according to the parts that are contained in them, which are the weazon and the gullet. Such as have no weazon and breath not, have ſcarce any neck, as moſt ſorts of Fiſhes: and ſome none at all, as all ſorts of Pectinals, Soals, Thornback, Flounders; and all cruſtaceous animals, as Creviſes, Crabs and Lobſters.

All

All which conſidered, the Wiſh of *Philoxenus* will hardly conſiſt with reaſon. More excuſable had it been to have wiſhed himſelf an Ape, which if common conceit ſpeak true, is exacter in taſte than any. Rather ſome kind of granivorous bird than a Crane, for in this ſenſe they are ſo exquiſite, that upon the firſt peck of their bill, they can diſtinguiſh the qualities of hard bodies; which the ſenſe of man diſcerns not without maſtication. Rather ſome ruminating animal, that he might have eat his meat twice over; or rather, as *Theophilus* obſerved in *Athenæus*, his deſire had been more reaſonable, had he wiſhed himſelf an Elephant, or an Horſe; for in theſe animals the appetite is more vehement, and they receive their viands in large and plenteous manner. And this indeed had been more ſuitable, if this were the ſame *Philoxenus* whereof *Plutarch* ſpeaketh, who was ſo uncivilly greedy, that to engroſs the meſs, he would preventively deliver his noſtrils in the diſh.

As for the muſical advantage, although it ſeem more reaſonable, yet do we not obſerve that Cranes and birds of long necks have any muſical, but harſh and clangous throats. But birds that are canorous, and whoſe notes we moſt commend, are of little throats and ſhort necks, as Nightingales, Finches, Linnets, Canary-birds and Larks. And truly, although the Weazon, throttle and tongue be the inſtruments of voice, and by their agitations do chiefly concurr unto theſe delightful modulations, yet cannot we diſtinctly and peculiarly aſſign the cauſe unto any particular formation; and I perceive the beſt thereof, the Nightingale, hath ſome diſadvantage in the tongue; which is not accuminate and pointed as in the reſt, but ſeemeth as it were cut off, which perhaps might give the hint unto the Fable of *Philomela*, and the cutting off her tongue by *Tereus*.

CHAP. XV.

Of the Lake Aſphaltites.

CONcerning the Lake *Aſphaltites*, the Lake of *Sodom*, or the Dead-Sea, that heavy bodies caſt therein ſink not, but by reaſon of a ſalt and bituminous thickneſs in the water float and ſwim above, narrations already made are of that variety, we can hardly from thence deduce a ſatisfactory determination; and that not only in the ſtory it ſelf, but in the cauſe alledged. As for the ſtory, men deliver it variouſly: ſome I fear too largely, as *Pliny*, who affirmeth that Bricks will ſwim therein. *Mandevil* goeth farther, that Iron ſwimmeth, and feathers ſink. *Munſter* in his Coſmography hath another relation, although perhaps derived from the Poem of *Tertullian*, that a Candle burning ſwimmeth, but if extinguiſhed ſinketh. Some more moderately, as *Joſephus*, and many others: affirming only that living bodies float, nor peremptorily averring they cannot ſink, but that indeed they do not eaſily deſcend. Moſt traditionally, as *Galen*, *Pliny*, *Solinus*, and *Strabo*, who ſeems to miſtake the Lake *Serbonis* for it. Few experimentally, moſt contenting themſelves in the experiment of *Veſpaſian*, by whoſe command ſome Captives bound were caſt therein, and found to float as though they could have ſwimmed: divers contradictorily, or contrarily, quite overthrowing the point. *Ariſtotle* in the ſecond of his Meteors ſpeaks lightly thereof, ὥσπερ μυθολογοῦσι, which word is variouſly rendred, by ſome as a fabulous account, by ſome as a common talk. *Biddulphus* divideth the common accounts of *Judea* into three parts, the one, ſaith he, are apparent Truths, the ſecond apparent falſhoods, the third are dubious or between both; in which form he ranketh the relation of this Lake. But *Andrew Thevet* in his Coſmography doth ocularly overthrow it; for he affirmeth, he ſaw an Aſs with his Saddle caſt therein and drowned.

Biddulphi itinerarium Anglicé.

Now

Now of these relations so different or contrary unto each other, the second is most moderate and safest to be embraced, which saith, that living bodies swim therein, that is, they do not easily sink: and this, untill exact experiment further determine, may be allowed, as best consistent with this quality, and the reasons alledged for it.

As for the cause of this effect, common opinion conceives it to be the salt and bituminous thickness of the water. This indeed is probable, and may be admitted as far as the second opinion concedeth. For certain it is that salt water will support a greater burden than fresh; and we see an egg will descend in salt water, which will swim in brine. But that Iron should float therein, from this cause, is hardly granted; for heavy bodies will only swim in that liquor, wherein the weight of their bulk exceedeth not the weight of so much water as it occupieth or taketh up. But surely no water is heavy enough to answer the ponderosity of Iron, and therefore that metal will sink in any kind thereof, and it was a perfect Miracle which was wrought this way by *Elisha*. Thus we perceive that bodies do swim or sink in different liquors, according unto the tenuity or gravity of those liquors which are to support them. So salt water beareth that weight which will sink in vinegar, vinegar that which will fall in fresh water, fresh water that which will sink in spirits of Wine, and that will swim in spirits of Wine which will sink in clear oyl; as we made experiment in globes of wax pierced with light sticks to support them. So that although it be conceived an hard matter to sink in oyl, I believe a man should find it very difficult, and next to flying, to swim therein. And thus will Gold sink in Quick-silver, wherein Iron and other metals swim; for the bulk of Gold is only heavier than that space of Quick-silver which it containeth: and thus also in a solution of one ounce of Quick-silver in two of *Aqua fortis*, the liquor will bear Amber, Horn, and the softer kinds of stones, as we have made trial in each.

But a private opinion there is which crosseth the common conceit, maintained by some of late, and alledged of old by *Strabo*, that the floating of bodies in this Lake proceeds not from the thickness of the water, but a bituminous ebullition from the bottom, whereby it wafts up bodies injected, and suffereth them not easily to sink. The verity thereof would be enquired by ocular exploration, for this way is also probable. So we observe, it is hard to wade deep in baths where springs arise; and thus sometime are balls made to play upon a spouting stream.

And therefore, until judicious and ocular experiment confirm or distinguish the assertion, that bodies do not sink herein at all, we do not yet believe; that they do not easily, or with more difficulty descend in this than other water, we shall readily assent. But to conclude an impossibility from a difficulty, or affirm whereas things not easily sink, they do not drown at all; beside the fallacy, is a frequent addition in humane expression, and an amplification not unusual as well in opinions as relations; which oftentimes give indistinct accounts of proximities, and without restraint transcend from one another. Thus, forasmuch as the torrid Zone was conceived exceeding hot, and of difficult habitation, the opinions of men so advanced its constitution, as to conceive the same unhabitable, and beyond possibility for man to live therein. Thus, because there are no Wolves in *England*, nor have been observed for divers generations, common people have proceeded into opinions, and some wise men into affirmations, they will not live therein, although brought from other Countries. Thus most men affirm, and few here will believe the contrary, that there be no Spiders in *Ireland*; but we have beheld some in that Country; and though but few, some Cob-webs we behold in Irish wood in *England*. Thus the Crocodile from an egg growing up to an exceeding magnitude, common conceit, and divers Writers deliver, it hath no period of encrease, but groweth as long as it liveth. And thus in brief, in most apprehensions the conceits of men extend the considerations of things, and dilate their notions beyond the propriety of their natures.

In

In the Mapps of the dead Sea or Lake of *Sodom*, we meet with the deſtroyed Cities, and in divers the City of *Sodom* placed about the middle, or far from the ſhore of it; but that it could not be far from *Segor*, which was ſeated under the mountains near the ſide of the Lake, ſeems inferrible from the ſudden arrival of *Lot*, who coming from *Sodom* at day-break, attained *Segor* at Sun-riſing; and therefore *Sodom* to be placed not many miles from it, and not in the middle of the Lake, which is accounted about eighteen miles over; and ſo will leave about nine miles to be paſſed in too ſmall a ſpace of time.

CHAP. XVI.

Of divers other Relations.

1. THE relation of *Averroes*, and now common in every mouth, of the Woman that conceived in a bath, by attracting the ſperm or ſeminal effluxion of a man admitted to bathe in ſome vicinity unto her, I have ſcarce faith to believe; and had I been of the Jury, ſhould have hardly thought I had found the Father in the perſon that ſtood by her. 'Tis a new and unſeconded way in Hiſtory to fornicate at a diſtance, and much offendeth the rules of Phyſick, which ſay, there is no generation without a joynt emiſſion, nor only a virtual, but corporal and carnal contaction. And although *Ariſtotle* and his adherents do cut off the one, who conceive no effectual ejaculation in women; yet in defence of the other they cannot be introduced. For, if as he believeth, the inordinate longitude of the organ, though in its proper recipient, may be a means to inprolificate the ſeed; ſurely the diſtance of place, with the comixture of an aqueous body muſt prove an effectual impediment, and utterly prevent the ſucceſs of a conception. And therefore that conceit concerning the daughters of *Lot*, that they were impregnated by their ſleeping father, or conceived by ſeminal pollution received at diſtance from him, will hardly be admitted. And therefore what is related of Devils, and the contrived deluſions of ſpirits, that they ſteal the ſeminal emiſſions of man, and tranſmit them into their Votaries in coition, is much to be ſuſpected; and altogether to be denied, that there enſue conceptions thereupon; however husbanded by Art, and the wiſeſt menagery of that moſt ſubtile Impoſtor. And therefore alſo that our magnified *Merlin* was thus begotten by the Devil, is a groundleſs conception; and as vain to think from thence to give the reaſon of his prophetical ſpirit. For if a generation could ſucceed, yet ſhould not the iſſue inherit the faculties of the Devil, who is but an Auxiliary, and no univocal Actor; Nor will his nature ſubſtantially concur to ſuch productions.

Generations by the Devil very improbable.

And although it ſeems not impoſſible, that impregnation may ſucceed from ſeminal ſpirits, and vaporous irradiations containing the active principle, without material and groſs immiſſions; as it happeneth ſometimes in imperforated perſons, and rare conceptions of ſome much under puberty or fourteen. As may be alſo conjectured in the coition of ſome Inſects, wherein the female makes intruſion into the male; and from the continued ovation in Hens, from one ſingle tread of a Cock, and little ſtock laid up near the vent, ſufficient for durable prolification. And although alſo in humane generation the groſs and corpulent ſeminal body may return again, and the great buſineſs be acted by what it carrieth with it: yet will not the ſame ſuffice to ſupport the ſtory in queſtion, wherein no corpulent immiſſion is acknowledged; anſwerable unto the fable of the *Talmudiſts*, in the ſtory of *Benzira*, begotten in the ſame manner on the Daughter of the Prophet *Jeremie*.

2. The

2. The Relation of *Lucillius*, and now become common, concerning *Craſſus* the Grand-father of *Marcus* the wealthy *Roman*, that he never laughed but once in all his life, and that was at an Aſs eating thiſtles, is ſomething ſtrange. For, if an indifferent and unridiculous object could draw his habitual auſtereneſs unto a ſmile: it will be hard to believe he could with perpetuity reſiſt the proper motives thereof. For the act of Laughter which is evidenced by a ſweet contraction of the muſcles of the face, and a pleaſant agitation of the vocal Organs, is not meerly voluntary, or totally within the juriſdiction of our ſelves: but as it may be conſtrained by corporal contaction in any, and hath been enforced in ſome even in their death: ſo the new unuſual or unexpected jucundities, which preſent themſelves to any man in his life, at ſome time or other will have activity enough to excitate the earthieſt ſoul, and raiſe a ſmile from moſt compoſed tempers. Certainly the times were dull when theſe things happened, and the wits of thoſe Ages ſhort of theſe of ours; when men could maintain ſuch immutable faces, as to remain like ſtatues under the flatteries of wit, and perſiſt unalterable at all efforts of Jocularity. The ſpirits in Hell, and *Pluto* himſelf, whom *Lucian* makes to laugh at paſſages upon earth, will plainly condemn theſe Saturnines, and make ridiculous the magnified *Heraclitus*, who wept prepoſterouſly, and made a Hell on earth; for rejecting the conſolations of life, he paſſed his days in tears, and the uncomfortable attendments of Hell.

Laughter, what kind of Paſſion it is.

3. The ſame conceit there paſſeth concerning our Bleſſed Saviour, and is ſometimes urged as an high example of gravity. And this is opinioned, becauſe in holy Scripture it is recorded he ſometimes wept, but never that he laughed. Which howſoever granted, it will be hard to conceive how he paſſed his younger years and childhood without a ſmile, if as Divinity affirmeth, for the aſſurance of his Humanity unto men, and the concealment of his Divinity from the Devil, he paſſed this age like other children, and ſo proceeded until he evidenced the ſame. And ſurely herein no danger there is to affirm the act or performance of that, whereof we acknowledg the power and eſſential property; and whereby indeed he moſt nearly convinced the doubt of his Humanity. Nor need we be afraid to aſcribe that unto the Incarnate Son, which ſometimes is attributed unto the Uncarnate Father; of whom it is ſaid, *He that dwelleth in the heavens ſhall laugh the wicked to ſcorn.* For a laugh there is of contempt or indignation, as well as of mirth and Jocoſity: And that our Saviour was not exempted from the ground hereof, that is, the paſſion of anger, regulated and rightly ordered by reaſon, the Schools do not deny: and beſides the experience of the Money-changers, and Dove-ſellers in the Temple, is teſtified by St. *John*, when he ſaith, the ſpeech of *David* was fulfilled in our Saviour.

Zelus domus tuæ comedit me.

Now the Alogie of this opinion conſiſteth in the illation; it being not reaſonable to conclude from Scripture negatively in points which are not matters of faith, and pertaining unto Salvation. And therefore although in the deſcription of the Creation there be no mention of Fire, Chriſtian Philoſophy did not think it reaſonable preſently to annihilate that Element, or poſitively to decree there was no ſuch thing at all. Thus whereas in the brief Narration of *Moſes* there is no record of Wine before the flood, we cannot ſatisfactorily conclude that *Noah* was the firſt that ever taſted thereof. And thus becauſe the word *Brain* is ſcarce mentioned once, but *Heart* above an hundred times in Holy Scripture; Phyſicians that diſpute the principality of parts, are not from hence induced to bereave the animal Organ of its priority. Wherefore the Scriptures being ſerious, and commonly omitting ſuch Parergies, it will be unreaſonable from hence to condemn all Laughter, and from conſiderations inconſiderable to diſcipline a man out of his nature. For this is by a ruſtical ſeverity to baniſh all urbanity; whoſe harmleſs and confined condition, as it ſtands commended by morality; ſo is it conſiſtent with Religion, and doth not offend Divinity.

Only in the Vulgar *Latin*, *Judg.* 9. 53.

4. The cuſtom it is of Popes to change their Name at their Creation; and the Author thereof is commonly ſaid to be *Bocca di porco*, or Swines-face; who therefore aſſumed the ſtile of *Sergius* the 2d, as being aſhamed ſo

foul a name ſhould diſhonour the Chair of *Peter*; wherein notwithſtanding, from *Montacutius* and others, I find there may be ſome miſtake. For *Maſſonius* who writ the Lives of Popes, acknowledgeth he was not the firſt that changed his name in that See; nor as *Platina* affirmeth, have all his Succeſſors preciſely continued that cuſtom; for *Adrian* the Sixth, and *Marcellus* the Second, did ſtill retain their Baptiſmal denomination. Nor is it proved, or probable, that *Sergius* changed the name of *Bocca di Porco*, for this was his Sirname or Gentilitius appellation; nor was it the cuſtom to alter that with the other: but he commuted his Chriſtian name *Peter* for *Sergius*, becauſe he would ſeem to decline the name of *Peter* the Second. A ſcruple I confeſs not thought conſiderable in other Sees, whoſe Originals and firſt Patriarchs have been leſs diſputed; nor yet perhaps of that reality as to prevail in points of the ſame nature. For the names of the Apoſtles, Patriarchs and Prophets have been aſſumed even to affectation; the name of Jeſus hath not been appropriate; but ſome in precedent ages have born that name, and many ſince have not refuſed the Chriſtian name of *Emmanuel*. Thus are there few names more frequent than *Moſes* and *Abraham* among the *Jews*: The *Turks* without ſcruple affect the name of *Mahomet*, and with gladneſs receive ſo honourable cognomination.

And truly in humane occurrences there ever have been many well directed intentions, whoſe rationalities will never bear a rigid examination, and though in ſome way they do commend their Authors, and ſuch as firſt began them, yet have they proved inſufficient to perpetuate imitation in ſuch as have ſucceeded them. Thus was it a worthy reſolution of *Godfrey*, and moſt Chriſtians have applauded it, That he refuſed to wear a Crown of Gold where his Saviour had worn one of Thorns. Yet did not his Succeſſors durably inherit that ſcruple, but ſome were anointed, and ſolemnly accepted the Diadem of Regality. Thus *Julius*, *Auguſtus* and *Tiberius* with great humility or popularity refuſed the name of *Imperator*, but their Succeſſors have challenged that Title, and retain the ſame even in its Titularity. And thus to come nearer our ſubject, the humility of *Gregory* the Great, would by no means admit the ſtile of Univerſal Biſhop; but the ambition of *Boniface* made no ſcruple thereof, nor of more queaſie reſolutions have been their Succeſſors ever ſince.

Turkiſh Hiſtory.

5. That *Tamerlane* was a *Scythian* Shepherd, from Mr. *Knolls* and others, from *Alhazen* a Learned *Arabian* who wrote his Life, and was Spectator of many of his Exploits, we have reaſons to deny. Not only from his birth, for he was of the Blood of the *Tartarian* Emperours, whoſe Father *Og* had for his Poſſeſſion the Country of *Sagathy*; which was no ſlender Territory, but comprehended all that Tract wherein were contained *Bactriana*, *Sogdiana*, *Margiana*, and the Nation of the *Maſſagetes*, whoſe capital City was *Samarcand*; a place though now decayed, of great Eſteem and Trade in former Ages: But from his Regal Inauguration, for it is ſaid, that being about the age of fifteen, his old Father reſigned the Kingdom, and Men of war unto him. And alſo from his Education, for as the ſtory ſpeaks it, he was inſtructed in the *Arabian* Learning, and afterward exerciſed himſelf therein. Now *Arabian* Learning was in a manner all the Liberal Sciences, eſpecially the Mathematicks, and Natural Philoſophy; wherein not many Ages before him there flouriſhed *Avicenna*, *Averroes*, *Avenzoar*, *Gober*, *Almanzor* and *Alhazen*, cognominal unto him that wrote his Hiſtory, whoſe Chronology indeed, although it be obſcure, yet in the opinion of his Commentator, he was Contemporary unto *Avicenna*, and hath left Sixteen Books of Opticks, of great eſteem with Ages paſt, and Textuary unto our days.

Now the ground of this miſtake was ſurely that which the *Turkiſh* Hiſtorian declareth. Some, ſaith he, of our Hiſtorians will needs have *Tamerlane* to be the Son of a Shepherd. But this they have ſaid, not knowing at all the cuſtom of their Country; wherein the principal revenues of the King and Nobles conſiſteth in Cattel; who deſpiſing Gold and Silver, abound in all ſorts thereof. And this was the occaſion that ſome men call them Shepherds, and alſo affirm this Prince deſcended from them. Now, if it

be

be reasonable, that great men whose possessions are chiefly in Cattel, should bear the name of Shepherds, and fall upon so low denominations; then may we say that *Abraham* was a Shepherd, although too powerful for four Kings: that *Job* was of that condition, who beside Camels and Oxen had seven thousand Sheep: and yet is said to be the greatest man in the East. Thus was *Mesha* King of *Moab* a Shepherd, who annually paid unto the Crown of *Israel*, an hundred thousand Lambs, and as many Rams. Surely it is no dishonourable course of life which *Moses* and *Jacob* have made exemplary: 'tis a profession supported upon the natural way of acquisition, and though contemned by the *Egyptians*, much countenanced by the *Hebrews*, whose Sacrifices required plenty of Sheep and Lambs. And certainly they were very numerous; for, at the consecration of the Temple, beside two and twenty thousand Oxen, King *Solomon* sacrificed an hundred and twenty thousand Sheep: and the same is observable from the daily provision of his house: which was ten fat Oxen, twenty Oxen out of the Pastures, and an hundred Sheep, beside Roe-buck, fallow Deer, and fatted Fowls. Wherein notwithstanding (if a punctual relation thereof do rightly inform us) the Grand Seignior doth exceed: the daily provision of whose Seraglio in the reign of *Achmet*, beside Beeves, consumed two hundred Sheep, Lambs and Kids when they were in season one hundred, Calves ten, Geese fifty, Hens two hundred, Chickens one hundred, Pigeons an hundred pair.

Description of the *Turkish Seraglio*, since printed. The daily provision of the *Seraglio*.

And therefore this mistake concerning the Noble *Tamerlane*, was like that concerning *Demosthenes*, who is said to be the Son of a Blacksmith, according to common conceit, and that handsome expression of *Juvenal*.

Quem pater ardentis massæ fuligine lippus,
A carbone & forcipibus, gladioque parante
Incude, & luteo Vulcano, ad Rhetora misit.

Thus Englished by Sir Robert Stapleton.

Whom's Father with the smoaky forge half blind,
From blows on sooty *Vulcan*'s anvil spent
In ham'ring swords, to study Rhet'rick sent.

But *Plutarch* who writ his life hath cleared this conceit, plainly affirming he was most Nobly descended, and that this report was raised, because his Father had many slaves that wrought Smiths work, and brought the profit unto him.

CHAP. XVII.

Of some Others.

1. WE are sad when we read the Story of *Belisarius* that worthy Chieftain of *Justinian*; who, after his Victories over *Vandals*, *Goths*, *Persians*, and his Trophees in three parts of the World, had at last his eyes put out by the Emperour, and was reduced to that distress, that he begged relief on the Highway, in that uncomfortable petition, *Date obolum Belisario*. And this we do not only hear in Discourses, Orations and Themes, but find it also in the leaves of *Petrus Crinitus*, *Volaterranus*, and other worthy Writers.

But, what may somewhat consolate all men that honour vertue, we do not discover the latter Scene of his Misery in Authors of Antiquity, or such as have expresly delivered the Stories of those times. For, *Suidas* is

ſilent herein, *Cedrenus* and *Zonaras*, two grave and punctual Authors, delivering only the confiſcation of his Goods, omit the Hiſtory of his mendication. *Paulus Diaconus* goeth farther, not only paſſing over this act, but affirming his Goods and Dignities were reſtored. *Agathius*, who lived at the ſame time, declareth he ſuffered much from the envy of the Court: but that he deſcended thus deep into affliction, is not to be gathered from his pen. The ſame is alſo omitted by *Procopius* a Contemporary and profeſſed enemy unto *Juſtinian* and *Beliſarius*, who hath left an opprobrious Book againſt them both.

Ἀνέκδοτα, or, *Arcana Hiſtoria.*

And in this opinion and hopes we are not ſingle, but *Andreas Aniatus* the Civilian in his *Parerga*, and *Franciſcus de Corduba* in his *Didaſcalia*, have both declaratorily confirmed the ſame, which is alſo agreeable unto the judgment of *Nicolaus Alemannus*, in his Notes upon that bitter Hiſtory of *Procopius*. Certainly ſad and Tragical ſtories are ſeldom drawn within the circle of their verities; but as their Relators do either intend the hatred or pity of the perſons, ſo are they ſet forth with additional amplifications. Thus have ſome ſuſpected it hath happened unto the ſtory of *Oedipus*; and thus do we conceive it hath fared with that of *Judas*, who having ſinned beyond aggravation, and committed one Villany which cannot be exaſperated by all other: is alſo charged with the murther of his reputed Brother, parricide of his Father, and Inceſt with his own Mother, as *Florilegus* or *Matthew* of *Weſtminſter* hath at large related. And thus hath it perhaps befallen the Noble *Beliſarius*; who, upon inſtigation of the Empreſs, having contrived the exile, and very hardly treated Pope *Serverius*, *Latin* pens, as a judgment of God upon this fact, have ſet forth his future ſufferings: and omitting nothing of amplification, they have alſo delivered this: which notwithſtanding *Johannes* the *Greek*, makes doubtful, as may appear from his Iambicks in *Baronius*, and might be a miſtake or miſapplication, tranſlating the affliction of one man upon another, for the ſame befell unto *Johannes Cappadox* *, Contemporary unto *Beliſarius*, and in great favour with *Juſtinian*; who being afterward baniſhed into *Egypt*, was fain to beg relief on the High-way.

* *Procop. Bell. Perſic.* 1. Ἄξιον ἢ ὀβολὸν αἰτεῖσθαι.

2. That *fluctus Decumanus*, or the tenth wave is greater and more dangerous than any other, ſome no doubt will be offended if we deny; and hereby we ſhall ſeem to contradict Antiquity; for, anſwerable unto the literal and common acception, the ſame is averred by many Writers, and plainly deſcribed by *Ovid*,

> *Qui venit hic fluctus, fluctus ſupereminet omnes,*
> *Poſterior nono eſt, undecimóque prior.*

Which notwithſtanding is evidently falſe; nor can it be made out by obſervation either upon the ſhore or the Ocean, as we have with diligence explored in both. And ſurely in vain we expect a regularity in the waves of the Sea, or in the particular motions thereof, as we may in its general reciprocations, whoſe cauſes are conſtant, and effects therefore correſpondent. Whereas its fluctuations are but motions ſubſervient; which winds, ſtorms, ſhores, ſhelves, and every interjacency irregulates. With ſemblable reaſon we might expect a regularity in the winds; whereof though ſome be ſtatary, ſome anniverſary, and the reſt do tend to determinate points of Heaven, yet do the blaſts and undulary breaths thereof maintain no certainty in their courſe; nor are they numerally feared by Navigators.

Of affinity hereto is that conceit of *Ovum Decumanum*, ſo called, becauſe the tenth Egg is bigger than any other, according unto the reaſon alledged by *Feſtus*, *Decumana ova dicuntur, quia ovum decimum majus naſcitur.* For the honour we bear unto the Clergy, we cannot but wiſh this true: but herein will be found no more of verity than in the other: and ſurely few will aſſent hereto without an implicit credulity, or Pythagorical ſubmiſſion unto every conception of number.

For

For ſurely the conceit is numeral, and though not in the ſenſe apprehended, relateth unto the number of ten, as *Franciſcus Sylvius* hath moſt probably declared. For, whereas amongſt ſimple numbers or Digits, the number of ten is the greateſt: therefore whatſoever was the greateſt in every kind, might in ſome ſenſe be named from this number. Now, becauſe alſo that which was the greateſt, was metaphorically by ſome at firſt called *Decumanus*; therefore whatſoever paſſed under this name, was literally conceived by others to reſpect and make good this number.

The conceit is alſo Latin; for the Greeks to expreſs the greateſt wave, do uſe the number of three, that is, the word τειχωμία, which is a concurrence of three waves in one, whence aroſe the Proverb, τειχωμία κακῶν, or a trifluctuation of evils, which *Eraſmus* doth render, *Malorum fluctus Decumanus*. And thus, although the terms be very different, yet are they made to ſignifie the ſelf-ſame thing; the number of ten to explain the number of three, and the ſingle number of one wave the collective concurrence of more.

3. The poyſon of *Paryſatis* reported from *Cteſias* by *Plutarch* in the life of *Artaxerxes*, whereby anointing a knife on the one ſide, and therewith dividing a bird; with the one half ſhe poyſoned *Statira*, and ſafely fed her ſelf on the other, was certainly a very ſubtile one, and ſuch as our ignorance is well content it knows not. But ſurely we had diſcovered a poyſon that would not endure *Pandora*'s box, could we be ſatisfied in that which for its coldneſs nothing could contain but an Aſſes hoof, and wherewith ſome report that *Alexander* the great was poyſoned. Had men derived ſo ſtrange an effect from ſome occult or hidden qualities, they might have ſilenced contradiction; but aſcribing it unto the manifeſt and open qualities of cold, they muſt pardon our belief; who perceive the coldeſt and moſt Stygian waters may be included in glaſſes; and by *Ariſtotle* who ſaith, that glaſs is the perfecteſt work of Art, we underſtand they were not then to be invented.

And though it be ſaid that poyſon will break a Venice-glaſs, yet have we not met with any of that nature. Were there a truth herein, it were the beſt preſervative for Princes and perſons exalted unto ſuch fears: and ſurely far better than divers now in uſe. And though the beſt of China diſhes, and ſuch as the Emperour doth uſe, be thought by ſome of infallible vertue unto this effect; yet will they not, I fear, be able to elude the miſchief of ſuch intentions. And though alſo it be true, that God made all things double, and that if we look upon the works of the moſt High, there are two and two, one againſt another; that one contrary hath another, and poyſon is not without a poyſon unto it ſelf: yet hath the curſe ſo far prevailed, or elſe our induſtry defected, that poyſons are better known than their Antidotes, and ſome thereof do ſcarce admit of any. And laſtly, although unto every poyſon men have delivered many Antidotes, and in every one is promiſed an equality unto its adverſary, yet do we often find they fail in their effects: Moly will not reſiſt a weaker cup than that of *Circe*; a man may be poyſoned a Lemnian diſh; without the miracle of *John*, there is no confidence in the earth of *Paul*; and if it be meant that no poyſon could work upon him, we doubt the ſtory, and expect no ſuch ſucceſs from the diet of *Mithridates*.

In what ſenſe God Almighty hath created all things double.

* *Terra Melit.*

A ſtory there paſſeth of an Indian King, that ſent unto *Alexander* a fair woman fed with Aconites and other poyſons, with this intent, either by converſe or copulation complexionally to deſtroy him. For my part, although the deſign were true, I ſhould have doubted the ſucceſs. For, though it be poſſible that poyſons may meet with tempers whereto they may become Aliments, and we obſerve from fowls that feed on fiſhes, and others fed with Garlick and Onyons, that ſimple aliments are not alwayes concocted beyond their vegetable qualities; and therefore that even after carnall converſion, poyſons may yet retain ſome portion of their natures: yet are they ſo refracted, cicurated and ſubdued, as not to make good their firſt and deſtructive malignities. And therefore the Stork that eateth Snakes,

and

and the Stare that feedeth upon Hemlock, though no commendable aliments, are not deſtructive poyſons. For, animals that can innoxiouſly digeſt theſe poyſons, become antidotal unto the poyſon digeſted. And therefore whether their breath be attracted, or their fleſh ingeſted, the poyſonous reliques go ſtill along with their Antidote: whoſe ſociety will not permit their malice to be deſtructive. And therefore alſo animals that are not miſchieved by poyſons which deſtroy us, may be drawn into Antidote againſt them; the Blood or Fleſh of Storks againſt the venom of Serpents, the Quail againſt Hellebore, and the * diet of Starlings againſt the drought of *Socrates*. Upon like grounds are ſome parts of Animals Alexipharmacal unto others; and ſome veins of the earth, and alſo whole regions, not only deſtroy the life of venemous creatures, but alſo prevent their productions. For though perhaps they contain the ſeminals of Spiders and Scorpions, and ſuch as in other earths by ſuſcitiation of the Sun may ariſe unto animation; yet lying under command of their Antidote, without hope of emergency they are poyſoned in their matrix by powers eaſily hindring the advance of their originals, whoſe confirmed forms they are able to deſtroy.

* Hemlock.

5. The ſtory of the wandring *Jew* is very ſtrange, and will hardly obtain belief; yet is there a formal account thereof ſet down by *Matthew Paris*, from the report of an *Armenian* Biſhop; who came into this Kingdom about four hundred years ago, and had often entertained this wanderer at his Table. That he was then alive, was firſt called *Cartaphilus*, was keeper of the Judgment Hall, whence thruſting out our Saviour with expoſtulation for his ſtay, was condemned to ſtay until his return; was after baptized by *Ananias*, and by the name of *Joſeph*; was thirty years old in the days of our Saviour, remembred the Saints that ariſed with him, the making of the Apoſtles Creed, and their ſeveral peregrinations. Surely were this true, he might be an happy arbitrator in many Chriſtian controverſies; but muſt impardonably condemn the obſtinacy of the *Jews*, who can contemn the Rhetorick of ſuch miracles, and blindly behold ſo living and laſting converſions.

Vade, quid moraris? Ego vado, tu autem morare donec venio.

6. Clearer confirmations muſt be drawn for the Hiſtory of Pope *Joan*, who ſucceeded *Leo* the fourth, and preceded *Benedict* the Third, than many we yet diſcover. And ſince it is delivered with *aiunt* and *ferunt* by many; ſince the learned *Leo Allatius* hath diſcovered, that ancient Copies of *Martinus Polonus*, who is chiefly urged for it, had not this ſtory in it; ſince not only the ſtream of *Latin* Hiſtorians have omitted it, but *Photius* the Patriarch, *Metrophanes Smyrnæus*, and the exaſperated *Greeks* have made no mention of it, but conceded *Benedict* the Third to be Succeſſor unto *Leo* the Fourth; he wants not grounds that doubts it.

Confutatio fabulæ de Joanna Papiſſa cum Nihuſio.

Many things Hiſtorical which ſeem of clear conceſſion, want not affirmations and negations, according to divided Pens: as is notoriouſly obſervable in the ſtory of *Hildebrand* or *Gregory* the Seventh, repugnantly delivered by the Imperial and Papal party. In ſuch divided records partiality hath much depraved Hiſtory, wherein if the equity of the Reader do not correct the iniquity of the Writer, he will be much confounded with repugnancies, and often find in the ſame perſon, *Numa* and *Nero*. In things of this nature moderation muſt intercede; and ſo charity may hope, that *Roman* Readers will conſtrue many paſſages in *Bolſec*, *Fayus*, *Schluſſelberg* and *Cochlæus*.

Of *Luther*, *Calvin*, *Beza*.

7. Every ear is filled with the ſtory of Frier *Bacon*, that made a Brazen head to ſpeak theſe words, *Time is*. Which though there want not the like relations, is ſurely too literally received, and was but a myſtical fable concerning the Philoſophers great work, wherein he eminently laboured: implying no more by the Copper-head, than the Veſſel wherein it was wrought, and by the words it ſpake, than the opportunity to be watched, about the *Tempus ortus*, or birth of the myſtical child, or Philoſophical King of *Lullius*: the riſing of the *Terra foliata* of *Arnoldus*, when the earth ſufficiently impregnated with the water, aſcendeth white and ſplendent. Which not obſerved, the work is irrecoverably loſt; according to that of *Petrus Bonus*: *Ibi eſt operis perfectio aut annihilatio; quoniam*

Rog. Bacon, Minorita Oxonienſis, vir doctiſſimus.

niam ipsâ die, immo horâ, oriuntur elementa simplicia depurata, quæ egent statim compositione, antequam volent ab igne. *Margarita pretiosa.*

Now letting slip this critical opportunity, he missed the intended treasure. Which had he obtained, he might have made out the tradition of making a Brazen wall about *England:* that is, The most powerful defence, and strongest fortification which Gold could have effected.

8. Who can but pity the vertuous *Epicurus*, who is commonly conceived to have placed his chief felicity in pleasure and sensual delights, and hath therefore left an infamous name behind him? How true, let them determine who read that he lived seventy years, and wrote more Books than any Philosopher but *Chrysippus*, and no less than three hundred, without borrowing from any Author. That he was contented with bread and water; and when he would dine with *Jove*, and pretend unto epulation, he desired no other addition than a piece of *Cytheridian* Cheese. That shall consider the words of *Seneca*, *Non dico, quod pleriq; nostrorum, sectam Epicuri flagitiorum magistrum esse: sed illud dico, male audit, infamis est, & immeritò.* Or shall read his life, his Epistles, his Testament in *Laërtius*, who plainly names them Calumnies, which are commonly said against them.

The ground hereof seems a mis-apprehension of his opinion, who placed his Felicity not in the pleasures of the body, but the mind, and tranquillity thereof, obtained by wisdom and vertue, as is clearly determined in his Epistle unto *Menaceus*. Now how this opinion was first traduced by the *Stoicks*, how it afterwards became a common belief, and so taken up by Authors of all ages, by *Cicero*, *Plutarch*, *Clemens*, *Ambrose*, and others; the learned Pen of *Gassendus* hath discovered. *De vita & moribus Epicuri.*

CHAP. XVIII.

More briefly of some others.

1. OTHER relations there are, and those in very good Authors, which though we do not positively deny, yet have they not been unquestioned by some, and at least as improbable truths have been received by others. Unto some it hath seemed incredible what *Herodotus* reporteth of the great Army of *Xerxes*, that drank whole Rivers dry. And unto the Author himself it appeared wondrous strange, that they exhausted not the provision of the Country, rather than the waters thereof. For as he maketh the account, and *Budeus de Asse* correcting the mis-compute of *Valla*, delivereth it: if every man of the Army had had a chenix of Corn a day, that is, a sextary and half, or about two pints and a quarter, the Army had daily expended ten hundred thousand and forty *Medimna's*, or measures containing six Bushels. Which rightly considered, the *Abderites* had reason to bless the Heavens, that *Xerxes* eat but one meal a day; and *Pythius* his noble Host, might with less charge and possible provision entertain both him and his Army. And yet may all be salved, if we take it hyperbolically, as wise men receive that expression in *Job*, concerning *Behemoth* or the Elephant, *Behold, he drinketh up a river and hasteth not; he trusteth that he can draw up Jordan into his mouth.*

2. That *Annibal* eat or brake through the *Alps* with Vinegar, may be too grosly taken; and the Author of his life annexed unto *Plutarch* affirmeth only, he used this artifice upon the tops of some of the highest Mountains. For as it is vulgarly understood, that he cut a passage for his Army through those mighty mountains, it may seem incredible, not only in the greatness of the effect, but the quantity of the efficient, and such as behold them, may think an Ocean of Vinegar too little for that effect. 'Twas a work indeed

rather

rather to be expected from earthquakes and inundations, than any corrosive waters, and much condemneth the judgment of *Xerxes*, that wrought through Mount *Athos* with Mattocks.

3. That *Archimedes* burnt the Ships of *Marcellus*, with speculums of Parabolical figures, at three furlongs, or as some will have it, at the distance of three miles, sounds hard unto reason, and artificial experience: and therefore justly questioned by *Kircherus*, who after long enquiry could find but one made by *Manfredus Septalius* that fired at fifteen paces. And therefore more probable it is, that the Ships were nearer the shore, or about some thirty paces: at which distance notwithstanding the effect was very great. But whereas men conceive the Ships were more easily set on flame, by reason of the pitch about them, it seemeth no advantage. Since burning-glasses will melt pitch or make it boil, not easily set it on fire.

De luce & umbra.

4. The story of the *Fabii*, whereof three hundred and six marching against the *Veientes*, were all slain, and one child alone to support the family remained; is surely not to be parallell'd, nor easie to be conceived, except we can imagin, that of three hundred and six, but one had children below the service of war; that the rest were all unmarried, or the wife but of one impregnated.

5. The received story of *Milo*, who by daily lifting a Calf, attained an ability to carry it being a Bull, is a witty conceit, and handsomly sets forth the efficacy of Assuefaction. But surely the account had been more reasonably placed upon some person not much exceeding in strength, and such a one as without the assistance of custom could never have performed that act; which some may presume that *Milo* without precedent artifice or any other preparative, had strength enough to perform. For as relations declare, he was the most pancratical man of *Greece*, and as *Galen* reporteth, and *Mercurialis* in his Gymnasticks representeth, he was able to persist erect upon an oyled plank, and not to be removed by the force or protrusion of three men. And if that be true which *Athenæus* reporteth, he was little beholding to custom for this ability. For in the Olympick Games, for the space of a furlong, he carried an Ox of four years upon his shoulders; and the same day he carried it in his belly: for as it is there delivered, he eat it up himself. Surely he had been a proper guest at *Grandgousiers* Feast, and might have matcht his throat that eat six Pilgrims for a Salad.

In Rabelais.

6. It much disadvantageth the Panegyrick of *Synesius*, and is no small disparagement unto baldness, if it be true what is related by *Ælian* concerning *Æschilus*, whose bald-pate was mistaken for a rock, and so was brained by a Tortoise which an Eagle let fall upon it. Certainly it was a very great mistake in the perspicacy of that Animal. Some men critically disposed, would from hence confute the opinion of *Copernicus*, never conceiving how the motion of the earth below, should not wave him from a knock perpendicularly directed from a body in the air above.

Who writ in the praise of baldness.

An Argument or instance against the motion of the earth.

7. It crosseth the Proverb, and *Rome* might well be built in a day, if that were true which is traditionally related by *Strabo*; that the great Cities *Anchiale* and *Tarsus*, were built by *Sardanapalus* both in one day, according to the inscription of his Monument, *Sardanapalus Anacyndaraxis filius, Anchialem & Tarsum unâ die ædificavi, Tu autem hospes Ede, Lude, Bibe, &c.* Which if strictly taken, that is, for the finishing thereof, and not only for the beginning; for an artificial or natural day, and not one of *Daniel*'s Weeks, that is, seven whole years; surely their hands were very heavy that wasted thirteen years in the private house of *Solomon*: It may be wondred how forty years were spent in the erection of the Temple of *Jerusalem*, and no less than an hundred in that famous one of *Ephesus*. Certainly it was the greatest Architecture of one day, since that great one of six; an Art quite lost with our Mechanicks, a work not to be made out, but like the walls of *Thebes*, and such an Artificer as *Amphion*.

8. It had been a sight only second unto the Ark to have beheld the great *Syracusia*, or mighty Ship of *Hiero*, described in *Athenæus*; and some have thought it a very large one, wherein were to be found ten Stables for Horses,

The *Syracusia* or King *Hiero*'s Galleon, of what bulk.

Horſes, eight Towers, beſides Fiſh-ponds, Gardens, Tricliniums, and many fair rooms paved with Agath, and precious Stones. But nothing was impoſſible unto *Archimedes*, the learned Contriver thereof; nor ſhall we queſtion his removing the Earth, when he finds an immoveable baſe to place his Engine unto it.

9. That the *Pamphilian* Sea gave way unto *Alexander* in his intended March toward *Perſia*, many have been apt to credit, and *Joſephus* is willing to believe, to countenance the paſſage of the *Iſraelites* through the Red Sea. But *Strabo* who writ before him, delivereth another account; that the Mountain *Climax* adjoyning to the *Pamphilian* Sea, leaves a narrow paſſage between the Sea and it, which paſſage at an Ebb and quiet Sea all Men take; but *Alexander* coming in the Winter, and eagerly purſuing his affairs, would not wait for the Reflux or return of the Sea; and ſo was fain to paſs with his Army in the water, and march up to the Navel in it.

10. The relation of *Plutarch* of a youth of *Sparta*, that ſuffered a Fox concealed under his robe to tear out his bowels, before he would either by voice or countenance betray his theft; and the other of the Spartan Lad, that with the ſame reſolution ſuffered a coal from the Altar to burn his arm, although defended by the Author that writes his life, is I perceive miſtruſted by Men of Judgment, and the Author with an *aiunt*, is made to ſalve himſelf. Aſſuredly it was a noble Nation that could afford an hint to ſuch inventions of patience, and upon whom, if not ſuch verities, at leaſt ſuch veriſimilities of fortitude were placed. Were the ſtory true, they would have made the only Diſciples for *Zeno*, and the *Stoicks*, and might perhaps have been perſwaded to laugh in *Phalaris* his Bull.

A Liſt of ſome hiſtorical *Errata's* in this and the following Sections.

11. If any Man ſhall content his belief with the ſpeech of *Balaam's* Aſs, without a belief of that of *Mahomet's* Camel, or *Livie's* Ox: If any Man make a doubt of *Giges* ring in *Juſtinus*, or conceives he muſt be a *Jew* that believes the Sabbatical River in *Joſephus*: If any man will ſay he doth not apprehend how the tayl of an *African* Wether out-weigheth the body of a good Calf, that is, an hundred pound, according unto *Leo Africanus*, or deſires before belief, to behold ſuch a creature as is the Ruck in *Paulus Venetus*, for my part I ſhall not be angry with his incredulity.

12. If any one ſhall receive as ſtretcht or fabulous accounts what is delivered of *Cocles*, *Scævola* and *Curtius*, the ſphere of *Archimedes*, the ſtory of the *Amazons*, the taking of the City of *Babylon*, not known to ſome therein in three days after; that the Nation was deaf which dwelt at the fall of *Nilus*, the laughing and weeping humour of *Heraclitus* and *Democritus*, with many more, he ſhall not want ſome reaſon and the authority of *Lancelotti*.

Farſalloni Hiſtorici.

13. If any man doubt of the ſtrange Antiquities delivered by Hiſtorians, as of the wonderful corps of *Antæus* untombed a thouſand years after his death by *Sertorius*. Whether there were no deceit in thoſe fragments of the Ark ſo common to be ſeen in the days of *Beroſus*; whether the Pillar which *Joſephus* beheld long ago, *Tertullian* long after, and *Bartholomeus de Saligniaco* and *Borchardus* long ſince, be the ſame with that of *Lot's* wife; whether this were the hand of *Paul*, or that which is commonly ſhewn the Head of *Peter*, if any doubt, I ſhall not much diſpute with their ſuſpicions. If any Man ſhall not believe the Turpentine Tree betwixt *Jeruſalem* and *Bethlehem*, under which the Virgin ſuckled our Saviour, as ſhe paſſed between thoſe Cities; or the fig-tree of *Bethany* ſhewed to this day, whereon *Zacheus* aſcended to behold our Saviour; I cannot tell how to enforce his belief, nor do I think it requiſite to attempt it. For, as it is no reaſonable proceeding to compel a Religion, or think to enforce our own belief upon another, who cannot without the concurence of Gods Spirit, have any indubitable evidence of things that are obtruded: So is it alſo in matters of common belief; whereunto neither can we indubitably aſſent, without the co-operation of our ſenſe or Reaſon, wherein conſiſt the principles of perſwaſion. For, as the habit of Faith in Divinity

To compel Religion, ſomewhat contrary to Reaſon.

is an Argument of things unſeen, and a ſtable aſſent unto things inevident, upon authority of the divine Revealer: So the belief of Man which depends upon humane teſtimony, is but a ſtaggering aſſent unto the affirmative, not without ſome fear of the negative. And as there is required the Word of God, or infuſed inclination unto the one, ſo muſt the actual ſenſation of our ſenſes, at leaſt the non-oppoſition of our reaſons procure our aſſent and acquieſcence in the other. So when *Euſebius* an holy Writer affirmeth, there grew a ſtrange and unknown plant near the ſtatue of Chriſt, erected by his Hæmorrhoidal Patient in the Goſpel, which attaining unto the hem of his veſture, acquired a ſudden faculty to cure all diſeaſes: Although he ſaith he ſaw the ſtatue in his days, yet hath it not found in many Men ſo much as humane belief. Some believing, others opinioning, a third ſuſpecting it might be otherwiſe. For indeed, in matters of belief the underſtanding aſſenting unto the relation, either for the authority of the perſon, or the probability of the object, although there may be a confidence of the one, yet if there be not a ſatisfaction in the other, there will ariſe ſuſpenſions; nor can we properly believe until ſome argument of reaſon, or of our proper ſenſe convince or determine our dubitations.

And thus it is alſo in matters of certain and experimented truth: for if unto one that never heard thereof, a man ſhould undertake to perſwade the affections of the Load-ſtone, or that Jet and Amber attract ſtraws and light bodies, there would be little Rhetorick in the authority of *Ariſtotle*, *Pliny*, or any other. Thus although it be true that the ſtring of a Lute or Viol will ſtir upon the ſtroak of an Uniſon or Diapazon in another of the ſame kind; that Alcanna being green, will ſuddenly infect the nails and other parts with a durable red; that a Candle out of a Muſket will pierce through an Inch-board, or an Urinal force a nail through a Plank; yet can few or none believe thus much without a viſible experiment. Which notwithſtanding falls out more happily for knowledge; for theſe relations leaving unſatisfaction in the Hearers, do ſtir up ingenuous dubioſities unto experiment, and by an exploration of all, prevent deluſion in any.

CHAP. XIX.

Of ſome Relations whoſe truth we fear.

LAſtly, As there are many Relations whereto we cannot aſſent, and make ſome doubt thereof; ſo there are divers others whoſe verities we fear, and heartily wiſh there were no truth therein.

1. It is an unſufferable affront unto filial piety, and a deep diſcouragement unto the expectation of all aged Parents, who ſhall but read the ſtory of that barbarous Queen, who after ſhe had beheld her royal Parent's ruin, lay yet in the arms of his Aſſaſſine, and carowſed with him in the skull of her Father. For my part, I ſhould have doubted the operation of Antimony, where ſuch a potion would not work; 'twas an act methinks beyond Anthropophagy, and a Cup fit to be ſerved up only at the Table of *Atreus*.

2. While we laugh at the ſtory of *Pygmalion*, and receive as a fable that he fell in love with a ſtatue; we cannot but fear it may be true, what is delivered by *Herodotus* concerning the *Egyptian* Pollinctors, or ſuch as anointed the dead; that ſome thereof were found in the act of carnality with them. From Wits that ſay 'tis more than incontinency for *Hylas* to ſport with *Hecuba*, and youth to flame in the frozen embraces of age, we require a name for this: wherein *Petronius* or *Martial* cannot relieve us.

The

The tyranny of † *Mezentius* did never equall the vitiosity of this *Incubus*, that could imbrace corruption, and make a Mistress of the grave; that could not resist the dead provocations of beauty, whose quick invitements scarce excuse submission. Surely, if such depravities there be yet alive, deformity need not despair; nor will the eldest hopes be ever superannuated, since death hath spurs, and carcasses have been courted.

† Who tyed dead and living bodies together.

3. I am heartily sorry, and wish it were not true, what to the dishonour of Christianity is affirmed of the *Italian*; who after he had inveigled his enemy to disclaim his faith for the redemption of his life, did presently poyniard him, to prevent repentance, and assure his eternal death. The villany of this Christian exceeded the persecution of Heathens, whose malice was never so † Longimanous as to reach the soul of their enemies; or to extend unto the exile of their *Elysiums*. And though the blindness of some ferities have savaged on the bodies of the dead, and been so injurious unto worms, as to disenter the bodies of the deceased; yet had they therein no design upon the Soul: and have been so far from the destruction of that, or desires of a perpetual death, that for the satisfaction of their revenge they wisht them many Souls, and were it in their power would have reduced them unto life again. It is a great depravity in our natures, and surely an affection that somewhat savoureth of Hell, to desire the society, or comfort our selves in the fellowship of others that suffer with us; but to procure the miseries of others in those extremities, wherein we hold an hope to have no society our selves, is methinks a strain above *Lucifer*, and a project beyond the primary seduction of Hell.

† Long-handed.

4. I hope it is not true, and some indeed have probably denied, what is recorded of the Monk that poysoned *Henry* the Emperour, in a draught of the holy Eucharist. 'Twas a scandalous wound unto Christian Religion, and I hope all Pagans will forgive it, when they shall read that a Christian was poysoned in a cup of Christ, and received his bane in a draught of his salvation. Had he believed Transubstantiation, he would have doubted the effect; and surely the sin it self received an aggravation in that opinion. it much commendeth the innocency of our forefathers, and the simplicity of those times, whose Laws could never dream so high a crime as parricide: whereas this at the least may seem to out-reach that fact, and to exceed the regular distinctions of murder. I will not say what sin it was to act it; yet may it seem a kind of martyrdom to suffer by it. For, although unknowingly, he died for Christ his sake, and lost his life in the ordained testimony of his death. Certainly, had they known it, some noble zeals would scarcely have refused it; rather adventuring their own death, than refusing the memorial of his.

Many other accounts like these we meet sometimes in history, scandalous unto Christianity, and even unto humanity; whose verities not only, but whose relations honest minds do deprecate. For of sins heteroclital, and such as want either name or precedent, there is oft-times a sin even in their histories. We desire no records of such enormities; sins should be accounted new, that so they may be esteemed monstrous. They omit of monstrosity as they fall from their rarity; for, Men count it veniall to err with their forefathers, and foolishly conceive they divide a sin in its society. The pens of Men may sufficiently expatiate without these singularities of villany; for, as they encrease the hatred of vice in some, so do they enlarge the theory of wickedness in all. And this is one thing that may make latter ages worse than were the former; For, the vicious examples of Ages past, poyson the curiosity of these present, affording a hint of sin unto seduceable Spirits, and soliciting those unto the imitation of them, whose heads were never so perversly principled as to invent them. In this kind we commend the wisdom and goodness of *Galen*, who would not leave unto the World too subtile a Theory of poisons; unarming thereby the malice of venemous Spirits, whose ignorance must be contented with Sublimate and Arsenick. For, surely there are subtiler venenations, such as will invisibly destroy, and like the Basilisks of Heaven. In things of

Hujus farinæ multa in historia horribili.

this nature ſilence commendeth Hiſtory: 'tis the veniable part of things loſt; wherein there muſt never riſe a * *Pancirollus*, nor remain any Regiſter, but that of Hell.

* Who writ *De Antiquis deperditis*, or of Inventions loſt.

And yet, if as ſome Stoicks opinion, and *Seneca* himſelf diſputeth, theſe unruly affections that make us ſin ſuch Prodigies, and even ſins themſelves be Animals; there is an Hiſtory of *Africa* and Story of Snakes in theſe. And if the tranſanimation of *Pythagoras*, or method thereof were true, that the Souls of men tranſmigrated into Species anſwering their former natures: ſome men muſt ſurely live over many Serpents, and cannot eſcape that very brood, whoſe Sire Satan entred. And though the objection of *Plato* ſhould take place, that Bodies ſubjected unto corruption, muſt fail at laſt before the period of all things, and growing fewer in number, muſt leave ſome ſouls apart unto themſelves; the ſpirits of many long before that time will find but naked habitations: and meeting no aſſimilables wherein to re-act their natures, muſt certainly anticipate ſuch natural deſolations.

Lactant.

Primus ſapientiæ gradus eſt, falſa intelligere.

FINIS.

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FINIS.

RELIGIO MEDICI.

The Eighth Edition, Corrected and Amended.

WITH

ANNOTATIONS

Upon all the obscure passages therein.

ALSO

OBSERVATIONS

BY

Sir KENELM DIGBY.

LONDON,

Printed for Robert Scott, Thomas Basset, Richard Chiswell,
and the Executor of John Wright. 1695.

A LETTER sent upon the Information of Animadverſions *to come forth, upon the imperfect and ſurreptitious Copy of* Religio Medici, *whilſt this true one was going to Preſs.*

Honourable Sir,

GIVE your Servant, who hath ever honour'd you, leave to take notice of a Book at preſent in the Preſs, intituled (as I am informed) *Animadverſions* upon a Treatiſe lately Printed under the Name of *Religio Medici*; hereof, I am advertiſed, you have deſcended to be the Author. Worthy Sir, permit your Servant to affirm there is contain'd therein nothing that can deſerve the Reaſon of your contradictions, much leſs the candor of your *Animadverſions*; and to certifie the truth thereof, that Book (whereof I do acknowledge my ſelf the Author) was penn'd many years paſt, and (what cannot eſcape your apprehenſion) with no intention for the Preſs, or the leaſt deſire to oblige the Faith of any Man to its aſſertions. But what hath more eſpecially emboldned my

Pen unto you at preſent, is, that the ſame Piece, contrived in my private Study, and as an exerciſe unto my ſelf, rather than exercitation for any other, having paſt from my hand under a broken and imperfect Copy, by frequent tranſcription it ſtill run forward into corruption, and after the addition of ſome things, omiſſion of others, and tranſpoſition of many, without my aſſent or privacy, the liberty of theſe Times committed it unto the Preſs; whence it iſſued ſo diſguiſed, the Author without diſtinction could not acknowledge it. Having thus miſcarried, within a few Weeks I ſhall, God willing, deliver unto the Preſs the true and intended Original (whereof in the mean time your worthy ſelf may command a view) otherwiſe when ever that Copy ſhall be extant, it will moſt clearly appear, how far the Text hath been miſtaken, and all Obſervations, Gloſſes, or Exercitations thereon, will in a great part impugn the Printer or Tranſcriber, rather than the Author. If after that you ſhall eſteem it worth your vacant hours to diſcourſe thereon, you ſhall but take that liberty which I aſſume my ſelf, that is, freely to abound in your ſenſe, as I have done in my own. However ye ſhall determine, you ſhall ſufficiently honour me in the Vouchſafe of your refute, and I oblige the whole World in the occaſion of your Pen.

Your Servant,

Norwich,
March 3. 1642.

T. B.

Worthy Sir,

Speedily upon the Receipt of your Letter of the third Current, I sent to find out the Printer that Mr. Crook *(who delivered me yours) told me was printing something under my Name, concerning your Treatise of* Religio Medici, *and to forbid him any further proceeding therein; but my Servant could not meet with him; whereupon I have left with Mr.* Crook *a Note to that purpose, entreating him to deliver it to the Printer. I verily believe there is some mistake in the information given you, and that what is printing must be from some other Pen than mine; for such Reflexions as I made upon your learned and ingenious Discourse, are so far from meriting the Press, as they can tempt no body to a serious reading of them; they were Notes hastily set down, as I suddenly ran over your excellent Piece, which is of so weighty a subject, and so strongly penned, as requireth much time, and sharp attention but to comprehend it; whereas what I writ was the imployment but of one sitting; and there was not twenty four hours between my receiving my Lord of* Dorset's *Letter that occasioned what I said, and the finishing my Answer to him; and yet part of*

that

that time was taken up in procuring your Book, which he desired me to read, and give him an account of; for till then I was so unhappy as never to have heard of that worthy Discourse. If that Letter ever come to your view, you will see the high value I set upon your great parts: and if it should be thought I have been something too bold in differing from your sense, I hope I shall easily obtain pardon, when it shall be considered, that his Lordship assigned it me as an Exercitation to oppose in it for entertainment, such passages as I might judge capable thereof; wherein what liberty I took, is to be attributed to the security of a private Letter, and to my not knowing (nor my Lord's) the Person whom it concerned.

But Sir, now that I am so happy as to have that knowledge, I dare assure you, that nothing shall ever issue from me, but savouring of all honour, esteem, and reverence both to your self, and that worthy production of yours. If I had the vanity to give my self reputation by entring the Lists in Publick, with so Eminent and Learned a Man as you are, yet I know right well, I am no wayes able to do it; it would be a very unequal congress: I pretend not to Learning: those slender Notions I have, are but dis-joynted pieces I have by chance gleaned up here and there: To encounter such a sinewy Opposite, or make Animadversions upon so smart a Piece as yours is, requireth a solid stock and exercise in School-learning. My superficial besprinkling will serve only for a private Letter, or a familiar Discourse with Lady-auditors. With longing I expect the coming abroad of the true Copy

of

of that Book, whose false and stoln one hath already given me so much delight. And so assuring you I shall deem it a great good fortune to deserve your favour and friendship, I kiss your hand and rest,

Your most humble

Servant,

Winchester-House,
March 20. 1642.

Kenelm Digby.

To

of that Book, whole Life and Fame one hath already given me so much delight. And so offering your I shall deem it a great good Fortune to deserve your favour and Friendship, I kiss your hand and rest,

Your most humble

Servant,

Winchester-House,
March 20. 1642.

Kenelm Digby.

To

To such as have, or shall peruse the Observations upon a former corrupt Copy of this Book.

THERE are some men that *Politician* speaks of, *Cui quàm recta manus, tam fuit & facilis:* and it seems the Author to the Observations of this Book would arrogate as much to himself, for they were by his own confession, but the conceptions of one Night; a hasty birth; and so it proves: for what is really controllable, he generally omitteth; and what is false upon the error of the Copy, he doth not alwayes take notice of; and wherein he would contradict, he mistaketh, or traduceth the intention, and (besides a Parenthesis sometimes upon the Author) only medleth with those Points from whence he takes an hint to deliver his prepared conceptions. But the gross of his Book is made out by discourses collateral, and digressions of his own, not at all emergent from this Discourse; which is easily perceptible unto the intelligent Reader. Thus much I thought good to let thee understand without the Authors knowledge, who

ſlighting the refute, hath inforcedly publiſhed (as a ſufficient confutation) his own Book: and in this I ſhall not make ſo bold with him, as the Obſervator hath done with that Noble Knight, whoſe Name he hath wrongfully prefixed, as I am informed, to ſlight Animadverſions: but I leave him to repentance, and thee to thy ſatisfaction.

Farewel.

Yours, *A. B.*

TO

TO THE READER.

CErtainly that Man were greedy of Life, who ſhould deſire to live when all the World were at an end; and he muſt needs be very impatient, who would repine at Death in the ſociety of all things that ſuffer under it. Had not almoſt every man ſuffered by the Preſs, or were not the Tyranny thereof become univerſal, I had not wanted reaſon for complaint: but in times wherein I have lived to behold the higheſt perverſion of that excellent Invention, the Name of his Majeſty defamed, the honour of Parliament depraved, the Writings of both depravedly, anticipatively, counterfeitly imprinted; complaints may ſeem ridiculous in private perſons; and men of my condition may be as incapable of affronts, as hopeleſs of their reparations. And truly had not the duty I owe unto the importunity of Friends, and the allegiance I muſt ever acknowledge unto Truth, prevailed with me; the inactivity of my diſpoſition might have made theſe ſufferings continual, and Time that brings other things to light, ſhould have ſatisfied

me in the remedy of its oblivion. But because things evidently false are not only printed, but many things of truth most falsly set forth; in this latter I could not but think my self ingaged: for though we have no power to redress the former, yet in the other the reparation being within our selves, I have at present represented unto the World a full and intended Copy of that Piece, which was most imperfectly and surreptitiously published before.

This I confess, about seven years past, with some others of affinity thereto, for my private exercise and satisfaction, I had at leisurable hours composed; which being communicated unto one, it became common unto many, and was by transcription successively corrupted, until it arrived in a most depraved Copy at the Press. He that shall peruse that Work, and shall take notice of sundry particulars and personal expressions therein, will easily discern the intention was not publick: and being a private exercise directed to my self, what is delivered therein, was rather a memorial unto me, than an example or rule unto any other: and therefore if there be any singularity therein correspondent unto the private conceptions of any man, it doth not advantage them; or if dissentaneous thereunto, it no way overthrows them. It was penned in such a place, and with such disadvantage, that (I protest) from the first setting of Pen unto Paper, I had not the assistance of any good Book, whereby to promote my invention, or relieve my memory; and therefore there might be many real lapses therein, which others might take notice of, and more that I suspected my self. It was set down many years past, and was the sense of

my conceptions at that time, not an immutable Law unto my advancing judgement at all times; and therefore there might be many things therein plausible unto my passed apprehension, which are not agreeable unto my present self. There are many things delivered Rhetorically, many expressions therein meerly Tropical, and as they best illustrate my intention; and therefore also there are many things to be taken in a soft and flexible sense, and not to be called unto the rigid test of Reason. Lastly, all that is contained therein, is in submission unto maturer discernments; and as I have declared, shall no further father them than the best and learned judgements shall authorize them: under favour of which considerations, I have made its secrecy publick, and committed the truth thereof to every ingenuous Reader.

Tho. Browne.

RELI-

RELI-

RELIGIO MEDICI.

FOR my *Religion*, though there be ſeveral circumſtances that might perſwade the World I have none at all, *as the general ſcandal of my Profeſſion,] *the natural courſe of my Studies], *the indifferency of my Behaviour and Diſcourſe in matters of Religion,] neither violently Defending one, nor with that common ardour and contention Oppoſing another; yet in deſpight hereof I dare, without uſurpation, aſſume the honourable ſtyle of a Chriſtian: * Not that I meerly owe this Title to the Font,] my Education, or Clime wherein I was born, as being bred up either to confirm thoſe Principles my Parents inſtilled into my unwary underſtanding, or by a general conſent proceed in the Religion of my Countrey: *But having in my riper years and confirmed judgement, ſeen and examined all,]I find my ſelf obliged by the Principles of Grace, and the Law of mine own Reaſon, to embrace no other name but this: Neither doth herein my zeal ſo far make me forget the general charity I owe unto humanity, as rather to hate, than pity *Turks*, *Infidels*, and (what is worſe) *Jews*; rather contenting my ſelf to enjoy that happy ſtyle, than maligning thoſe who refuſe ſo glorious a Title. *Sect.* 1.

But becauſe the name of a Chriſtian is become too general to expreſs our Faith, *there being a Geography of Religion] as well as Lands, and every Clime diſtinguiſhed not only by their Laws and Limits, but circumſcribed by their Doctrines and Rules of Faith; to be particular, I am of that reformed new caſt Religion, *wherein I diſlike nothing but the name;] of the ſame belief our Saviour taught, the Apoſtles diſſeminated, the Fathers authorized, and the Martyrs confirmed; but by the ſiniſter ends of Princes, the ambition and avarice of Prelates, and the fatal corruption of times, ſo decayed, impaired, and fallen from its native beauty, that it required the careful and charitable hand of theſe times to reſtore it to its primitive integrity. *Now the accidental occaſion whereupon,] the ſlender means whereby, the low and abject condition of the perſon by whom ſo good a work was ſet on foot, which in our Adverſaries beget contempt and ſcorn, fills me with wonder, and is the very ſame objection the inſolent Pagans firſt caſt at Chriſt and his Diſciples. *Sect.* 2.

Sect. 3. * Yet I have not ſo ſhaken hands with thoſe deſperate Reſolutions who had rather venture at large their decayed bottom, than bring her in to be new trimm'd in the Dock; who had rather promiſcuouſly retain all, than abridge any, and obſtinately be what they are, than what they have been, as to ſtand in diameter and ſwords point with them: We have reformed from them, not againſt them;] for omitting thoſe improperations, and terms of ſcurrility betwixt us, which only difference our affections, and not our cauſe, there is between us one common name and appellation, one faith and neceſſary body of principles common to us both; and therefore I am not ſcrupulous to converſe and live with them, to enter their Churches in deſect of ours, and either pray with them, or for them: I could never perceive any rational conſequence from thoſe many Texts which prohibit the Children of *Iſrael* to pollute themſelves with the Temples of the Heathens; we being all Chriſtians, and not divided by ſuch deteſted impieties as might prophane our Prayers, or the place wherein we make them; or that a reſolved Conſcience may not adore her Creator any where, eſpecially in places devoted to his ſervice; where if their Devotions offend him, mine may pleaſe him; if theirs prophane it, mine may hallow it: Holy water and Crucifix (dangerous to the common people) deceive not my judgment, nor abuſe my devotion at all: I am, I confeſs, naturally inclined to that, which miſguided zeal terms ſuperſtition: my common converſation I do acknowledge auſtere, my behaviour full of rigour, ſometimes not without moroſity; yet at my Devotion I love to uſe the civility of my knee, my hat, and hand, with all thoſe outward and ſenſible motions which may expreſs or promote my inviſible Devotion. I ſhould violate my own arm rather than a Church, nor willingly deface the name of Saint or Martyr. At the ſight of a Croſs or Crucifix I can diſpenſe with my hat, but ſcarce with the thought or memory of my Saviour: I cannot laugh at, but rather pity the fruitleſs journeys of Pilgrims, or contemn the miſerable condition of Fryars; for though miſplaced in circumſtances, there is ſomething in it of Devotion. I could never hear the † *Ave-Mary* Bell without an elevation, or think it a ſufficient warrant, becauſe they erred in one circumſtance, for me to err in all, that is in ſilence and dumb contempt; whilſt therefore they directed their Devotions to Her, I offered mine to God, and rectified the Errors of their Prayers, by rightly ordering mine own. At a ſolemn Proceſſion I have wept abundantly, while my conſorts blind with oppoſition and prejudice, have fallen into an exceſs of ſcorn and laughter: There are queſtionleſs both in *Greek*, *Roman*, and *African* Churches, Solemnities and Ceremonies, whereof the wiſer Zeals do make a Chriſtian uſe, and ſtand condemned by us, not as evil in themſelves, but as allurements and baits of ſuperſtition to thoſe vulgar heads that look aſquint on the face of truth, and thoſe unſtable judgments that cannot conſiſt in the narrow point and centre of vertue without a reel or ſtagger to the circumference.

† *A Church-Bell that tolls every day at ſix and twelve of the Clock, at the hearing whereof, every one in what place ſoever either of houſe or ſtreet, betakes himſelf to his prayer, which is commonly directed to the* Virgin.

Sect. 4. As there were many Reformers, ſo likewiſe many Reformations, every Country proceeding in a particular way and method, according as their National Intereſt, together with their Conſtitution and Clime inclin'd them; ſome angrily, and with extremity, others calmly, and with mediocrity, not rending but eaſily dividing the community, and leaving an honeſt poſſibility of a reconciliation; which though peaceable Spirits do deſire, and may conceive that revolution of time and the mercies of God may effect, yet that judgment that ſhall conſider the preſent antipathies between the two extreams, their contrarieties in condition, affection and opinion, may with the ſame hopes expect an union in the Poles of Heaven.

Sect. 5. But to difference my ſelf nearer, and draw into a leſſer Circle: There is no Church whoſe every part ſo ſquares unto my Conſcience; whoſe Articles, Conſtitutions and Cuſtoms, ſeem ſo conſonant unto reaſon, and as it were framed to my particular Devotion, as this whereof I hold

hold my Belief, the Church of *England*, to whose Faith I am a sworn Subject; and therefore in a double Obligation subscribe unto her Articles, and endeavour to observe her Constitutions: whatsoever is beyond, as points indifferent, I observe according to the rules of my private reason, or the humour and fashion of my Devotion; neither believing this, because *Luther* affirmed it, or disproving that, because *Calvin* hath disavouched it. I condemn not all things in the Council of *Trent*, nor approve all in the Synod of *Dort*. In brief, where the Scripture is silent, the Church is my Text; where that speaks, 'tis but my Comment: where there is a joynt silence of both, I borrow not the rules of my Religion from *Rome* or *Geneva*, but the dictates of my own reason. It is an unjust scandal of our adversaries, and a gross errour in our selves, to compute the Nativity of our Religion from * *Henry* the Eighth, who though he rejected the Pope, refused not the Faith of *Rome*,] and effected no more than what his own Predecessors desired and assayed in Ages past, * and was conceived the State of *Venice* would have attempted in our days.] It is as uncharitable a point in us to fall upon those popular scurrilities and opprobrious scoffs of the Bishop of *Rome*, to whom as temporal Prince, we owe the duty of good language; I confess there is a cause of passion between us; by his sentence, I stand excommunicated, Heretick is the best language he affords me; yet can no ear witness, I ever returned to him the name of Antichrist, Man of sin, or Whore of *Babylon*. It is the method of Charity to suffer without reaction: Those usual Satyrs and invectives of the Pulpit may perchance produce a good effect on the vulgar, whose ears are opener to Rhetorick than Logick; yet do they in no wise confirm the faith of Wiser Believers, who know that a good Cause needs not to be patron'd by passion, but can sustain it self upon a temperate dispute.

I could never divide my self from any man upon the difference of an Opinion, * or be angry with his Judgment for not agreeing with me in that, from which perhaps within a few days I should dissent my self.] I have no Genius to disputes in Religion, and have often thought it wisdom to decline them, especially upon a disadvantage, or when the cause of truth might suffer in the weakness of my patronage: Where we desire to be informed, 'tis good to contest with men above our selves; but to confirm and establish our opinions, 'tis best to argue with judgments below our own, that the frequent spoils and victories over their reasons, may settle in our selves an esteem and confirmed opinion of our own. * Every man is not a proper Champion for Truth, nor fit to take up the Gauntlet in the cause of Verity:] Many from the ignorance of these Maxims, and an inconsiderate Zeal unto Truth, have too rashly charged the Troops of Error, and remain as Trophies to the enemies of Truth: A man may be in as just possession of Truth as of a City, and yet be forced to surrender; 'tis therefore far better to enjoy her with peace, than to hazzard her on a battle: if therefore there rise any doubts in my way, I do forget them, or at least defer them, till my better settled judgment, and more manly reason be able to resolve them, for I perceive every mans own reason is his best *Oedipus*, and will upon a reasonable truce, find a way to loose those bonds wherewith the subtleties of error have enchained our more flexible and tender judgments. * In Philosophy, where truth seems double-fac'd, there is no man more Paradoxical than my self; but in Divinity I love to keep the Road;] and though not in an implicite, yet an humble faith, follow the great wheel of the Church, by which I move, not reserving any proper Poles or motion from the Epicycle of my own brain; by this means I leave no gap for Heresie, Schisms, or Errors, of which at present I hope I shall not injure Truth to say, I have no taint or tincture: I must confess my greener studies have been polluted with two or three, not any begotten in the latter Centuries, but old and obsolete, such as could never have been revived, but by such extravagant and irregular heads as mine; for indeed * Heresies perish not with their Authors, but like the River *Arethusa*, though they lose their currents in one place, they rise up again in another:] One general Council is *Sect. 6.*

not able to extirpate one ſingle Hereſie; it may be cancell'd for the preſent; but revolution of time, and the like aſpects from Heaven, will reſtore it, when it will flouriſh till it be condemned again. For as though there were a *Metempſychoſis*, and the ſoul of one man paſſed into another; Opinions do find after certain Revolutions, men and minds like thoſe that firſt begat them. To ſee our ſelves again, we need not look for *b Plato*'s year: every man is not only himſelf; there have been many *Diogenes*'s, and as many *Timons*, though but few of that name; men are liv'd over again; the world is now as it was in Ages paſt; there was none then, but there hath been ſome one ſince that Parallels him, and is as it were his revived ſelf.

b *A revolution of certain thouſand years when all things ſhould return unto their former eſtate, and he be teaching again in his School as when he delivered this Opinion.*

Sect. 7. *Now the firſt of mine was that of the *Arabians*,] that the ſouls of men periſhed with their bodies, but ſhould yet be raiſed again at the laſt day: not that I did abſolutely conceive a mortality of the ſoul, but if that were, which Faith, not Philoſophy hath yet throughly diſproved, and that both entred the grave together, yet I held the ſame conceit thereof that we all do of the body, that it riſe again. Surely it is but the merits of our unworthy Natures, if we ſleep in darkneſs until the laſt Alarm. A ſerious reflection upon my own unworthineſs did make me backward from challenging this prerogative of my ſoul; ſo that I might enjoy my Saviour at the laſt, I could with patience be nothing almoſt unto eternity. * The ſecond was that of *Origen*,] that God would not perſiſt in his vengeance for ever, but after a definite time of his wrath, he would releaſe the damned ſouls from torture: which error I fell into upon a ſerious contemplation of the great Attribute of God, his Mercy; and did a little cheriſh it in my ſelf, becauſe I found therein no malice, and a ready weight to ſway me from the other extream of deſpair, whereunto melancholy and contemplative natures are too eaſily diſpoſed. A third there is which I did never poſitively maintain or practiſe, but have often wiſhed it had been conſonant to Truth, and not offenſive to my Religion, and that is the Prayer for the dead; whereunto I was inclin'd from ſome charitable inducements, whereby I could ſcarce contain my Prayers for a friend at the ringing of a Bell, or behold his Corps without an Oriſon for his Soul; 'Twas a good way methought to be remembred by poſterity, and far more noble than an Hiſtory. Theſe Opinions I never maintained with pertinacy, or endeavoured to enveagle any mans belief unto mine, nor ſo much as ever revealed or diſputed them with my deareſt friends; by which means I neither propagated them in others, nor confirmed them in my ſelf; but ſuffering them to flame upon their own ſubſtance, without addition of new fewel, they went out inſenſibly of themſelves: therefore * theſe Opinions, though condemned by lawful Councils, were not Hereſies in me, but bare Errors, and ſingle Lapſes of my underſtanding without a joynt depravity of my will:] Thoſe have not only depraved underſtandings, but diſeaſed affections, which cannot enjoy a ſingularity without an Hereſie, or be the Author of an Opinion without they be of a Sect alſo; this was the villany of the firſt ſchiſm of *Lucifer*, who was not content to err alone, but drew into his Faction many Legions of Spirits, and upon this experience he tempted only *Eve*, as well underſtanding the communicable nature of ſin, and that to deceive but one, was tacitely and upon conſequence to delude them both.

Sect. 8. That Hereſies ſhould ariſe, we have the prophecy of Chriſt; but that old ones ſhould be aboliſhed, we hold no prediction. That there muſt be Hereſies, is true; not only in our Church, but alſo in any other: even in doctrines heretical, there will be ſuper-hereſies; and Arians not only divided from the Church, but alſo among themſelves: for heads that are diſpoſed unto Schiſm and complexionally propenſe to innovation, are naturally diſpoſed for a community, nor will be ever confined unto the order or œconomy of one body; and therefore when they ſeparate from others, they knit but looſely among themſelves; nor contented with a general breach or dichotomy with their Church, do ſubdivide and mince themſelves almoſt into Atoms. 'Tis true, that men of ſingular parts and humours have not been free from ſingular opinions and conceits in all ages; retaining

retaining ſomething not only beſide the opinion of his own Church or any other, but alſo any particular Author; which notwithſtanding a ſober Judgment may do without offence or hereſie; for there are yet, after all the Decrees of Councils, and the niceties of the Schools, many things untouch'd, unimagin'd, wherein the liberty of an honeſt Reaſon may play and expatiate with ſecurity, and far without the circle of an Hereſie.

Sect. 9. As for thoſe wingy Myſteries in Divinity, and airy ſubtilties in Religion, which have unhing'd the brains of better heads, they never ſtretched the *Pia Mater* of mine; methinks there be not impoſſibilities enough in Religion, for an active faith, * the deepeſt Myſteries ours contains, have not only been illuſtrated, but maintained by Syllogiſm, and the rule of Reaſon:] I love to loſe my ſelf in a myſtery, to purſue my Reaſon to an *O altitudo!* 'Tis my ſolitary recreation to poſe my apprehenſion with thoſe involved ænigma's and riddles of the Trinity, with Incarnation and Reſurrection. I can anſwer all the Objections of Satan and my rebellious Reaſon, with that odd reſolution I learned of *Tertullian*, *Certum eſt quia impoſſibile eſt.* I deſire to exerciſe my faith in the difficulteſt point; for to credit ordinary and viſible objects, is not faith, but perſwaſion. Some believe the better for ſeeing Chriſt's Sepulchre; * and when they have ſeen the Red Sea, doubt not of the Miracle.] Now contrarily, I bleſs my ſelf, and am thankful that I lived not in the days of Miracles, that I never ſaw Chriſt nor his Diſciples; I would not have been one of thoſe *Iſraelites* that paſs'd the Red Sea, nor one of Chriſt's Patients on whom he wrought his wonders; then had my faith been thruſt upon me; nor ſhould I enjoy that greater bleſſing pronounced to all that believe and ſaw not. 'Tis an eaſie and neceſſary belief, to credit what our eye and ſenſe hath examined: I believe he was dead and buried, and roſe again; and deſire to ſee him in his glory, rather than to contemplate him in his Cenotaphe, or Sepulchre. Nor is this much to believe; as we have reaſon, we owe this faith unto Hiſtory: they only had the advantage of a bold and noble Faith; who lived before his coming, who upon obſcure Prophecies and myſtical Types could raiſe a belief, and expect apparent impoſſibilities.

Sect. 10. 'Tis true, there is an edge in all firm belief, and with an eaſie Metaphor we may ſay, the Sword of Faith; but in theſe obſcurities I rather uſe it in the adjunct the Apoſtle gives it, a Buckler; under which I conceive a wary combatant may lie invulnerable. Since I was of underſtanding to know we knew nothing, my Reaſon hath been more pliable to the will of Faith, I am now content to underſtand a myſtery without a rigid definition, in an eaſie and Platonick deſcription. That *b* allegorical deſcription of *Hermes*, pleaſeth me beyond all the Metaphyſical definitions of Divines; where I cannot ſatisfie my reaſon, I love to humour my fancy: * I had as lieve you tell me that *anima eſt angelus hominis*, *eſt Corpus Dei*, as *Entelechia*; *Lux eſt umbra Dei*, as *actus perſpicui*;] where there is an obſcurity too deep for our Reaſon, 'tis good to ſit down with a deſcription, periphraſis, or adumbration; for by acquainting our reaſon how unable it is to diſplay the viſible and obvious effects of nature, it becomes more humble and ſubmiſſive unto the ſubtilties of faith; and thus I teach my haggard and unreclaimed reaſon to ſtoop unto the lure of Faith. I believe there was already a tree whoſe fruit our unhappy Parents taſted, though in the ſame Chapter when God forbids it, 'tis poſitively ſaid, the plants of the field were not yet grown; * for God had not caus'd it to rain upon the earth:] * I believe that the Serpent (if we ſhall literally underſtand it) from his proper form and figure, made his motion on his belly, before the curſe.] * I find the tryal of the Pucillage and virginity of Women, which God ordained the *Jews*, is very fallible.] Experience and Hiſtory informs me, that not only many particular Women, but likewiſe * whole Nations have eſcaped the curſe of Childbirth, which God ſeems to pronounce upon the whole Sex;] yet do I believe that all this is true, which indeed my Reaſon would perſwade me to be falſe; and this I think is no vulgar part of Faith, to believe a thing not only above,

b *Sphæra cujus centrum ubique, circumferentia nullibi.*

but contrary to Reaſon, and againſt the Arguments of our proper Senſes.

Sect. 11. In my ſolitary and retired imagination, (*Neque enim cum porticus, aut me lectulus accepit, deſum mihi*) I remember I am not alone; and therefore forget not to contemplate him and his attributes who is ever with me, eſpecially thoſe two mighty ones, his Wiſdom and Eternity: with the one I recreate, with the other I confound my underſtanding: for * who can ſpeak of Eternity without a ſolœciſm, or think thereof without an Ecſtaſie? Time we may comprehend,] 'tis but five days elder than our ſelves, and hath the ſame Horoſcope with the World; but to retire ſo far back as to apprehend a beginning, to give ſuch an infinite ſtart forwards as to conceive an end in an eſſence that we affirm hath neither the one nor the other, it puts my Reaſon to St. *Paul's* Sanctuary: my Philoſophy dares not ſay the Angels can do it; God hath not made a Creature that can comprehend him; 'tis a priviledge of his own nature: *I am that I am*, was his own definition unto *Moſes*; and 'twas a ſhort one to confound mortality, that durſt queſtion God, or ask him what he was, * indeed he only is;] all others have and ſhall be: but in Eternity there is no diſtinction of Tenſes; and therefore that terrible term *Predeſtination*, which hath troubled ſo many weak heads to conceive, and the wiſeſt to explain, is in reſpect to God no preſcious determination of our Eſtates to come, but a definitive blaſt of his will already fulfilled, and at the inſtant that he firſt decreed it; for to his Eternity which is indiviſible, and altogether, the laſt Trump is already ſounded, the reprobates in the flame, and the bleſſed in *Abraham's* boſom. St. *Peter* ſpeaks modeſtly, when he ſaith, *a thouſand years to God are but as one day:* for to ſpeak like a Philoſopher, thoſe continued inſtances of time which flow into a thouſand years, make not to him one moment; what to us is to come, to his Eternity is preſent, his whole duration being but one permanent point, without Succeſſion, Parts, Flux, or Diviſion.

Sect. 12. There is no attribute that adds more difficulty to the myſtery of the Trinity, where, though in a relative way of Father and Son, we muſt deny a priority. * I wonder how *Ariſtotle* could conceive the World eternal, or how he could make good two Eternities:] his ſimilitude of a Triangle, comprehended in a ſquare, doth ſomewhat illuſtrate the Trinity of our Souls, and that the Triple Unity of God; for * there is in us not three, but a Trinity of Souls,] becauſe there is in us, if not three diſtinct Souls, yet differing Faculties, that can, and do ſubſiſt apart in different Subjects, and yet in us are thus united as to make but one Soul and ſubſtance: if one Soul were ſo perfect as to inform three diſtinct Bodies, that were a petty Trinity: conceive the diſtinct number of three, not divided nor ſeparated by the intellect, but actually comprehended in its Unity, and that is a perfect Trinity: I have often admired the myſtical way of *Pythagoras*, and the ſecret Magick of numbers. Beware of Philoſophy, is a precept not to be received in too large a ſenſe; for in this Maſs of Nature there is a ſet of things that carry in their Front, though not in Capital Letters yet in Stenography, and ſhort Characters, ſomething of Divinity, which to wiſer Reaſons ſerve as Luminaries in the Abyſs of Knowledge, and to judicious beliefs, as Scales and Roundles to mount the Pinacles and higheſt pieces of Divinity. The ſevere Schools ſhall never laugh me out of the Philoſophy of *Hermes*, that this viſible World is but a Picture of the inviſible, wherein as in a Pourtract, things are not truely, but in equivocal ſhapes, and as they counterfeit ſome real ſubſtance in that inviſible Fabrick.

Sect. 13. That other attribute wherewith I recreate my devotion, is his Wiſdom, in which I am happy; and for the contemplation of this only, do not repent me that I was bred in the way of ſtudy: The advantage I have of the vulgar, with the content and happineſs I conceive therein, is an ample recompence for all my endeavours, in what part of knowledge ſoever. Wiſdom is his moſt beauteous Attribute, no man can attain unto it, yet *Solomon* pleaſed God when he deſired it. He is wiſe, becauſe he knows all things; and he knoweth all things, becauſe he made them all: but his greateſt knowledge is in comprehending that he made not, that is, himſelf. And this is alſo the greateſt knowledge in man. For this do I honour my own profeſſion, and embrace

brace the counſel even of the Devil himſelf: had he read ſuch a Lecture in Paradiſe, as he did at* *Delphos*, we had better known our ſelves, nor had we ſtood in fear to know him. I know he is wiſe in all, wonderful in what we conceive, but far more in what we comprehend not; for we behold him but aſquint, upon reflex or ſhadow; our underſtanding is dimmer than *Moſes*'s Eye; we are ignorant of the back-parts or lower ſide of his Divinity; therefore to prie into the maze of his Counſels, is not only folly in man, but preſumption even in Angels; like us, they are his Servants, not his Senators; he holds no Counſel, but that myſtical one of the Trinity, wherein though there be three Perſons, there is but one mind that decrees without Contradiction: nor needs he any: his actions are not begot with deliberation, his Wiſdom naturally knows what's beſt: his intellect ſtands ready fraught with the ſuperlative and pureſt *Idea*'s of goodneſs: conſultation and election, which are two motions in us, make but one in him: his actions ſpringing from his power at the firſt touch of his will. Theſe are Contemplations Metaphyſical: my humble ſpeculations have another Method, and are content to trace and diſcover thoſe expreſſions he hath left in his Creatures, and the obvious effects of Nature: there is no danger to profound theſe myſteries, no *ſanctum ſanctorum* in Philoſophy: the world was made to be inhabited by Beaſts, but ſtudied and contemplated by Man: 'tis the Debt of our Reaſon we owe unto God, and the homage we pay for not being Beaſts; without this, the world is ſtill as though it had not been, or as it was before the ſixth day, when as yet there was not a Creature that could conceive, or ſay there was a world. The wiſdom of God receives ſmall honour from thoſe vulgar Heads that rudely ſtare about, and with a groſs ruſticity admire his works; thoſe highly magnifie him, whoſe judicious inquiry into his Acts, and deliberate reſearch into his Creatures, return the duty of a devout and learned admiration.

* Γνῶθι σεαυτὸν, *Noſce teipſum.*

Therefore,

Search while thou wilt, and let thy reaſon go
To ranſome truth even to th' Abyſs below;
Rally the ſcattered Cauſes; and that line
Which Nature twiſts, be able to untwine.
It is thy Maker's will, for unto none,
But unto reaſon can he e're be known.
The Devils know thee not, thoſe damned Meteors
Build not thy glory, but confound thy Creatures.
Teach my endeavours ſo thy works to read,
That learning them in thee I may proceed.
Give thou my reaſon that inſtructive flight,
Whoſe weary wings may on thy hands ſtill light.
Teach me to ſoar aloft, yet ever ſo,
When near the Sun, to ſtoop again below.
Thus ſhall my humble Feathers ſafely hover,
And though near Earth, more than the Heavens diſcover.
And then at laſt, when homeward I ſhall drive
Rich with the Spoils of Nature to my Hive,
There will I ſit like that induſtrious Flie,
Buzzing thy praiſes, which ſhall never die,
Till death abrupts them, and ſucceeding glory
Bid me go on in a more laſting ſtory.

And this is almoſt all wherein an humble Creature may endeavour to requite, and ſome way to retribute unto his Creator: for if not he that ſaith, *Lord, Lord*, but *he that doth the will of the Father, ſhall be ſaved*; certainly our wills muſt be our performances, and our intents make out our Actions; otherwiſe our pious labours ſhall find anxiety in our Graves, and our beſt endeavours not hope, but fear a Reſurrection.

* There

Sect. 14. * There is but one first cause, and four second causes of all things ;] some are without efficient, as God ; others without matter, as Angels ; some without form, as the first matter : but every Essence created or uncreated, hath its final cause, and some positive end both of its Essence and Operation ; this is the cause I grope after in the works of Nature : on this hangs the providence of God : to raise so beauteous a structure, as the World and the Creatures thereof, was but his Art ; but their sundry and divided operations, with their predestinated ends, are from the Treasury of his wisdom. In the causes, nature and affections of the Eclipses of the Sun and Moon, there is most excellent speculation ; but to profound farther, and to contemplate a reason why his providence hath so disposed and ordered their motions in that vast circle, as to conjoyn and obscure each other, is a sweeter piece of Reason, and a diviner point of Philosophy ; therefore sometimes, and in some things, there appears to me as much Divinity in *Galen* his Books *De usu partium*, as in *Suarez*'s Metaphysicks : Had *Aristotle* been as curious in the enquiry of this cause as he was of the other, he had not left behind him an imperfect piece of Philosophy, but an absolute Tract of Divinity.

Sect. 15. *Natura nihil agit frustra*, is the only indisputable Axiome in Philosophy, * there are no *Grotesques* in nature ;] not any thing framed to fill up empty Cantons, and unnecessary spaces : in the most imperfect Creatures, and such as were not preserved in the Ark, but having their Seeds and Principles in the womb of Nature, are every where, where the power of the Sun is ; in these is the wisdom of his hand discovered : Out of this rank *Solomon* chose the object of his admiration ; indeed what reason may not go to School to the wisdom of Bees, Ants, and Spiders? what wise hand teacheth them to do what reason cannot teach us? Ruder heads stand amazed at those prodigious pieces of Nature, Whales, Elephants, Dromedaries and Camels ; these, I confess, are the Colossus's and Majestick pieces of her hand ; but in these narrow Engins there is more curious Mathematicks ; and the civility of these little Citizens, more neatly sets forth the wisdom of their Maker. * Who admires not *Regio-Montanus* his Fly beyond his Eagle,]*or wonders not more at the operation of two Souls in those little Bodies, than but one in the Trunk of a Cedar?] I could never content my contemplation with those general pieces of wonder, the Flux and Reflux of the Sea, the increase of *Nile*, the conversion of the Needle to the North ; and have studied to match and parallel those in the more obvious and neglected pieces of Nature, which without further travel I can do in the Cosmography of my self ; * we carry with us the wonders we seek without us:] There is all *Africa* and her prodigies in us ; we are that bold and adventurous piece of nature, which he that studies wisely learns in a *compendium*, what others labour at in a divided piece and endless volume.

Sect. 16. Thus there are two Books from whence I collect my Divinity ; besides that written one of God, * another of his servant Nature, that universal and publick Manuscript, that lies expans'd unto the eyes of all ;] those that never saw him in the one, have discovered him in the other : this was the Scripture and Theology of the Heathens ; the natural motion of the Sun made them more admire him, than its supernatural station did the Children of *Israel* ; the ordinary effects of nature wrought more admiration in them, than in the other all his Miracles ; surely the Heathens knew better how to joyn and read these mystical Letters, than we Christians, who cast a more careless eye on these common Hieroglyphicks, and disdain to suck Divinity from the flowers of Nature. Nor do I so forget God as to adore the name of Nature ; which I define not with the Schools, to be the principle of motion and rest, but that streight and regular line, that setled and constant course the wisdom of God hath ordained the actions of his creatures, according to their several kinds. To make a revolution every day, is the nature of the Sun, because of that necessary course which God hath ordained it, from which it cannot swerve, by a faculty from that voice which first did give it motion. Now this course of Nature God seldom alters or perverts, but like an

excellent

excellent Artiſt hath ſo contrived his work, that with the ſelf-ſame inſtrument, without a new creation, he may effect his obſcureſt deſigns. Thus he ſweeteth the Water with a Wood, preſerveth the creatures in the Ark, which the blaſt of his mouth might have as eaſily created; for God is like a skilful Geometrician, who when more eaſily, and with one ſtroak of his Compaſs he might deſcribe or divide a right line, had yet rather do this in a circle or longer way, according to the conſtituted and fore-laid principles of his Art: yet this rule of his he doth ſometimes pervert, to acquaint the world with his Prerogative, leſt the arrogancy of our reaſon ſhould queſtion his power, and conclude he could not: And thus I call the effects of nature the works of God, whoſe hand and inſtrument ſhe only is; and therefore to aſcribe his actions unto her, is to devolve the honour of the principal agent, upon the inſtrument: which if with reaſon we may do, then let our hammers riſe up and boaſt they have built our houſes, and our pens receive the honour of our writings. I hold there is a general beauty in the works of God, and therefore no deformity in any kind of Species of creature whatſoever: I cannot tell by what Logick we call a *Toad*, a *Bear*, or an *Elephant*, ugly, they being created in thoſe outward ſhapes and figures which beſt expreſs the actions of their inward forms. And having paſt that general Viſitation of God, who ſaw that all that he had made was good, that is, conformable to his will, which abhors deformity, and is the rule of order and beauty: there is no deformity but in monſtroſity, wherein notwithſtanding there is a kind of Beauty: Nature ſo ingeniouſly contriving the irregular parts, as they become ſometimes more remarkable than the principal Fabrick. To ſpeak yet more narrowly, there was never any thing ugly or miſ-ſhapen, but the Chaos: wherein, notwithſtanding, to ſpeak ſtrictly, there was no deformity, becauſe no form, nor was it yet impregnate by the voice of God: Now nature is not at variance with Art, nor Art with Nature; they being both the ſervants of his Providence: Art is the perfection of Nature: were the World now as it was the ſixth day, there were yet a Chaos: Nature hath made one World, and Art another. In brief, * all things are artificial; for Nature is the Art of God.]

This is the ordinary and open way of his Providence, which Art and Induſtry have in a good part diſcovered, whoſe effects we may foretell without an Oracle: to foreſhew theſe, is not Prophecy, but Prognoſtication. There is another way full of Meanders and Labyrinths, whereof the Devil and Spirits have no exact Ephemerides, and that is a more particular and obſcure method of his Providence, * directing the operations of individual and ſingle Eſſences:] this we call Fortune, that ſerpentine and crooked line, whereby he draws thoſe actions his wiſdom intends in a more unknown and ſecret way: This cryptick and involved method of his Providence have I ever admired, nor can I relate the Hiſtory of my life, the occurrences of my days, the eſcapes or dangers, and hits of chance, with a *Bezo las Manos* to Fortune, or a bare Gramercy to my good Stars: *Abraham* might have thought the *Ram* in the thicket came thither by accident: humane reaſon would have ſaid, that meer chance conveyed *Moſes* in the Ark to the ſight of *Pharoah*'s Daughter: What a Labyrinth is there in the ſtory of *Joſeph*, able to convert a Stoick? Surely there are in every mans Life certain rubs, doublings and wrenches, which paſs a while under the effects of chance, but at the laſt well examined, prove the meer hand of God. 'Twas not dumb chance, that to diſcover the Fougade or Powder-Plot, contrived a miſcarriage in the Letter. I like the Victory of 88. the better for that one occurrence which our enemies imputed to our diſhonour, and the partiality of Fortune, to wit, the tempeſts and contrariety of Winds. King *Philip* did not detract from the Nation, when he ſaid, he ſent his Armado to fight with men, and not to combate with the Winds. Where there is a manifeſt diſproportion between the powers and forces of two ſeveral Agents, upon a Maxim of reaſon we may promiſe the Victory to the Superiour: but when un-

Sect. 17.

unexpected accidents slip in, and unthought of occurrences intervene, these must proceed from a power that owes no obedience to those Axioms: where, as in the writing upon the wall, we may behold the hand, but see not the spring that moves it. The success of that petty Province of *Holland* (of which the Grand *Seignior* proudly said, if they should trouble him as they did the *Spaniard*, he would send his men with shovels and pick-axes, and throw it into the Sea) I cannot altogether ascribe to the ingenuity and industry of the people, but the mercy of God that hath disposed them to such a thriving Genius; and to the will of his Providence, that disposeth her favour to each Country in their pre-ordinate season. * All cannot be happy at once; for because the glory of one State depends upon the ruin of another,] there is a revolution and vicissitude of their greatness, and must obey the swing of that wheel, not moved by Intelligences, but by the hand of God, whereby all Estates arise to their *Zenith* and Vertical points, according to their predestinated periods. For the lives, not only of men, but of Commonwealths, and the whole World, run not upon an Helix that still enlargeth; but on a Circle, where arriving to their meridian, they decline in obscurity, and fall under the Horizon again.

Sect. 18. These must not therefore be named the effects of Fortune, but in a relative way, and as we term the works of Nature: it was the ignorance of mans reason that begat this very name, and by a careless term miscalled the Providence of God: for there is no liberty for causes to operate in a loose and straggling way; nor any effect whatsoever, but hath its warrant from some universal or superiour Cause. 'Tis not a ridiculous devotion to say a prayer before a Game at Tables; for even in *fortilegies* and matters of greatest uncertainty, there is a setled and pre-ordered course of effects. It is we that are blind, not Fortune: because our Eye is too dim to discover the mystery of her effects, we foolishly paint her blind, and hoodwink the Providence of the Almighty. I cannot justifie that contemptible Proverb, *That fools only are Fortunate*; or that insolent Paradox, *that a wise man is out of the reach of Fortune*; much less those opprobrious Epithets of Poets, *Whore*, *Baud*, and *Strumpet*. * 'Tis, I confess, the common fate of men of singular gifts of mind, to be destitute of those of fortune;] which doth not any way deject the Spirit of wiser judgments, who throughly understand the justice of this proceeding; and being inrich'd with higher donatives cast a more careless eye on these vulgar parts of felicity. It is a most unjust ambition to desire to engross the mercies of the Almighty, not to be content with the goods of mind, without a possession of those of body or fortune: and it is an error worse than heresie, to adore these complemental and circumstantial pieces of felicity, and undervalue those perfections and essential points of happiness, wherein we resemble our Maker. To wiser desires it is satisfaction enough to deserve, though not to enjoy the favours of Fortune; let Providence provide for Fools: 'tis not partiality, but equity in God, who deals with us but as our natural Parents; those that are able of Body and Mind, he leaves to their deserts; to those of weaker merits he imparts a larger portion, and pieces out the defect of one, by the excess of the other. Thus have we no just quarrel with Nature, for leaving us naked; or to envy the Horns, Hoofs, Skins and Furs of other Creatures, being provided with Reason, that can supply them all. * We need not labour with so many Arguments to confute Judicial Astrology;] for if there be a truth therein, it doth not injure Divinity: if to be born under *Mercury* disposeth us to be witty, under *Jupiter* to be wealthy; I do not owe a Knee unto these, but unto that merciful Hand that hath ordered my indifferent and uncertain nativity unto such benevolous Apects. Those: that hold that all things are governed by Fortune, had not erred, had they not persisted there: The *Romans* that erected a Temple to Fortune, acknowledged therein, though in a blinder way, somewhat of Divinity; for in a wise supputation all things begin and end in the Almighty. There is a nearer way to Heaven than *Homer's* Chain; an easie Logick may conjoyn a Heaven and Earth in one Argument, and with less than a *Sorites* resolve all things into God. For though

though we chriſten effects by their moſt ſenſible and neareſt Cauſes, yet is God the true and infallible Cauſe of all; whoſe concourſe though it be general, yet doth it ſubdivide it ſelf into the particular Actions of every thing, and is that Spirit, by which each ſingular Eſſence not only ſubſiſts, but performs its operation.

The bad conſtruction, and perverſe comment on theſe pair of ſecond Cauſes, or viſible hands of God, have perverted the Devotion of many unto Atheiſm; who forgetting the honeſt Adviſoes of Faith, have liſtened unto the conſpiracy of Paſſion and Reaſon. I have therefore always endeavoured to compoſe thoſe Feuds and angry Diſſentions between Affection, Faith and Reaſon: For * there is in our Soul a kind of Triumvirate, or triple Government of three Competitors, which diſtract the Peace of this our Common wealth, not leſs than did that other the State of *Rome*.] *Sect. 19.*

As Reaſon is a Rebel unto Faith, ſo Paſſion unto Reaſon: As the propoſitions of Faith ſeem abſurd unto Reaſon, ſo the Theorems of Reaſon unto Paſſion, and both unto Reaſon; yea a moderate and peaceable diſcretion may ſo ſtate and order the matter, that they may be all Kings, and yet make but one Monarchy, every one exerciſing his Soveraignty and Prerogative in a due time and place, according to the reſtraint and limit of circumſtance. There is, as in Philoſophy, ſo in Divinity, ſturdy doubts, and boiſterous Objections, wherewith the unhappineſs of our knowledge too nearly acquainteth us. More of theſe no man hath known than my ſelf, which I confeſs I conquered, not in a martial poſture, but on my knees. For our endeavours are not only to combat with doubts, but always to diſpute with the Devil: the villany of that Spirit takes a hint of Infidelity from our Studies, and by demonſtrating a naturality in one way, makes us miſtruſt a miracle in another. Thus having peruſed the *Archidoxes*, and read the ſecret Sympathies of things, he * would diſſwade my belief from the miracle of the Brazen Serpent,] make me conceit that Image worked by Sympathy, and was but an *Ægyptian* trick to cure their Diſeaſes without a miracle. Again, having ſeen ſome experiments of *Bitumen*, and having read far more of *Naphtha*, he wiſpered to my curioſity the fire of the Altar might be natural, * and bid me miſtruſt a miracle in *Elias*,] when he entrenched the Altar round with Water: for that inflammable ſubſtance yields not eaſily unto Water, but flames in the Arms of its Antagoniſt. And thus would he inveagle my belief * to think the combuſtion of *Sodom* might be natural,] and that there was an Aſphaltick and Bituminous nature in that Lake before the Fire of *Gomorrha*. I know that *Manna* is now plentifully gathered in *Calabria*; and *Joſephus* tells me in his days it was as plentiful in *Arabia*; the Devil therefore made the *quare*, Where was then the miracle in the days of *Moſes*? the *Iſraelites* ſaw but that in his time, the Natives of thoſe Countries behold in ours. Thus the Devil played at Cheſs with me, and yielding a Pawn, thought to gain a Queen of me, taking advantage of my honeſt endeavours and whilſt I laboured to raiſe the ſtructure of my Reaſon, he ſtrived to undermine the edifice of my Faith.

Neither had theſe or any other ever ſuch advantage of me, as to incline me to any point of Infidelity or deſperate poſitions of Atheiſm; for I have been theſe many years of opinion there was never any * Thoſe that held Religion was the difference of Man from Beaſts,] have ſpoken probably, and proceed upon a principle as inductive as the other. * That doctrine of *Epicurus*, that denied the Providence of God, was no Atheiſm, but a magnificent and high ſtrained conceit of his Majeſty, which he deemed too ſublime to mind the trivial Actions of thoſe inferiour Creatures.] That fatal neceſſity of the Stoicks is nothing but the immutable Law of his will. Thoſe that heretofore denied the Divinity of the Holy Ghoſt, have been, condemned, but as Hereticks; and thoſe that now deny our Saviour (though more than Hereticks) are not ſo much as Atheiſts: for though they deny two perſons in the Trinity, they hold as we do, there is but one God. *Sect. 20.*

* That Villain and Secretary of Hell, that compoſed that miſcreant piece

of the three Impostors,] though divided from all Religions, and was neither Jew, Turk nor Christian, was not a positive Atheist. I confess every Country hath its *Machiavel*, every age its *Lucian*, where of common Heads must not hear, nor more advanced judgments too rashly venture on: It is the Rhetorick of Satan, and may pervert a loose or prejudicate belief.

Sect. 21. I confess I have perused them all, and can discover nothing that may startle a discreet belief; yet are their heads carried off with the wind and breath of such motives. I remember a Doctor in Physick of *Italy*, who could not perfectly believe the immortality of the Soul, because *Galen* seemed to make a doubt thereof. With another I was familiarly acquainted in *France*, a Divine, and a man of singular parts, that on the same point was so plunged and gravelled with † three lines of *Seneca*, that all our Antidotes, drawn from both Scripture and Philosophy, could not expel the poyson of his errour: There are a sect of Heads, that can credit the relations of Mariners, yet question the Testimonies of St. *Paul*: and peremptorily maintain the traditions of *Ælian* or *Pliny*; yet in Histories of Scripture raise Queries and Objections, believing no more than they can parallel in humane Authors. I confess * there are in Scripture Stories that do exceed the Fables of Poets,] and to a captious Reader sound like *Garagantua* or *Bevis*: Search all the Legends of times past, and the fabulous conceits of these present, and 'twill be hard to find one that deserves to carry the Buckler unto *Sampson*; yet is all this of an easie possibility, if we conceive a divine concourse, or an influence but from the little Finger of the Almighty. It is impossible that either in the discourse of man, or in the infallible Voice of God, to the weakness of our apprehensions, there should not appear irregularities, contradictions and antinomies: my self could shew a catalogue of doubts, never yet imagined nor questioned, as I know, which are not resolved at the first hearing; not fantastick Queries or Objections of Air; for I cannot hear of Atoms in Divinity. I can read the History of the Pidgeon that was sent out of the Ark, and returned no more, yet not question how she found out her Mate that was left behind: That *Lazarus* was raised from the dead, yet not demand where in the interim his Soul awaited; or raise a Law-case, whether his Heir might lawfully detain his inheritance bequeathed unto him by his death, and he, though restored to life, have no Plea or Title unto his former possessions. Whether *Eve* was framed out of the left side of *Adam*, I dispute not; because I stand not yet assured which is the right side of a man; or whether there be any such distinction in Nature: that she was edified out of the Rib of *Adam*, I believe * yet raise no question who shall arise with that Rib at the Resurrection:] whether *Adam* was an Hermaphrodite, as the Rabbins contend upon the Letter of the Text, because it is contrary to reason, there should be an Hermaphrodite before there was a Woman; or a composition of two Natures, before there was a second composed. Likewise, * whether the World was created in Autumn, Summer, or the Spring] because it was created in them all; for whatsoever Sign the Sun possesseth, those four seasons are actually existent. It is the Nature of this Luminary to distinguish the several seasons of the year, all which it makes at one time in the whole Earth, and successive in any part thereof. There are a bundle of curiosities, not only in Philosophy, but in Divinity, proposed and discussed by men of most supposed abilities, which indeed are not worthy our vacant hours, much less our serious Studies. Pieces only fit to be placed in *Pantagruel*'s Library, or bound up with *Tartaretus de modo Cacandi*.

† *Post mortem nihil est, ipsaque Mors nihil. Mors individua est noxia corpori, Nec patiens animæ. Toti morimur, nullaq; pars manet Nostri.*

In Rabelais.

Sect. 22. These are niceties that become not those that peruse so serious a Mystery. There are others more generally questioned and called to the Bar, yet methinks of an easie and possible truth.

'Tis ridiculous to put off, or down the general Flood of *Noah*, in that particular inundation of *Deucalion*:] that there was a Deluge once, seems not to me so great a Miracle, as that there is not one alwayes. How all the kinds of Creatures, not only in their own bulks, but with a competency of food and sustenance, might be preserved in one Ark, and within the

extent

extent of three hundred Cubits, to a reaſon that rightly examines it, will appear very feaſible.] There is another ſecret not contained in the Scripture which is more hard to comprehend,* and put the honeſt Father to the refuge of a Miracle;] and that is, not only how the diſtinct pieces of the World, and divided Iſlands ſhould be firſt planted by men, but inhabited by Tigers, Panthers, and Bears. How *America* abounded with beaſts of prey, and noxious Animals, yet contained not in it that neceſſary Creature, a Horſe, is very ſtrange. By what paſſage thoſe, not only Birds, but dangerous and unwelcome Beaſts came over: How there be Creatures there, which are not found in this Triple Continent; all which muſt needs be ſtrange unto us, that hold but one Ark, and that the Creatures began their progreſs from the Mountains of *Ararat*: They who to ſalve this would make the Deluge particular, proceed upon a principle that I can no way grant; not only upon the negative of holy Scriptures, but of mine own Reaſon, whereby I can make it probable, that the World was as well peopled in the time of *Noah*, as in ours; * and fifteen hundred years to people the World, as full a time for them, as four thouſand years ſince have been to us.] There are other aſſertions and common Tenents drawn from Scripture, and generally believed as Scripture, whereunto notwithſtanding, I would never betray the liberty of my Reaſon. 'Tis Paradox to me, * that *Methuſalem* was the longeſt liv'd of all the Children of *Adam*] and no man will be able to prove it; when from the proceſs of the Text, I can manifeſt it may be otherwiſe. * That *Judas* periſhed by hanging himſelf, there is no certainty in Scripture: though in one place it ſeems to affirm it, and by a doubtful word hath given occaſion to tranſlate it; yet in another place, in a more punctual deſcription, it makes it improbable, and ſeems to overthrow it.] That our Fathers, after the Flood, erected the Tower of *Babel*, to preſerve themſelves againſt a ſecond Deluge, is generally opinioned and believed, yet is there another intention of theirs expreſſed in Scripture: Beſides, it is improbable from the circumſtance of the place, that is, a Plain in the Land of *Shinar*: Theſe are no points of Faith, and therefore may admit a free diſpute. There are yet others, and thoſe familiarly concluded from the Text, wherein (under favour) I ſee no conſequence: The Church of *Rome* confidently proves the opinion of Tutelary Angels, from that Anſwer when *Peter* knockt at the Door; *'Tis not he, but his Angel*; that is, might ſome ſay, his Meſſenger, or ſome body from him; for ſo the Original ſignifies; and is as likely to be the doubtful Families meaning. This expoſition I once ſuggeſted to a young Divine, that anſwered upon this point; to which I remember the *Franciſcan* Opponent replied no more; but, That it was a new, and no authentick interpretation.

Theſe are but the concluſions and fallible diſcourſes of man upon the Word of God, for ſuch I do believe the Holy Scriptures; yet were it of man, I could not chuſe but ſay, it was the moſt ſingular and ſuperlative piece that hath been extant ſince the Creation: were I a Pagan, I ſhould not refrain the Lecture of it; * and cannot but commend the judgment of *Ptolomy*,] that thought not his Library compleat without it. * The *Alcoran* of the *Turks* (I ſpeak without prejudice) is an ill compoſed Piece, containing in it vain and ridiculous Errors in Philoſophy] impoſſibilities, fictions, and vanities beyond laughter, maintained by evident and open Sophiſms, the Policy of Ignorance, depoſition of Univerſities, and baniſhment of Learning; that hath gotten Foot by Arms and violence: This without a blow, hath diſſeminated it ſelf through the whole Earth. It is not unremarkable what *Philo* firſt obſerved, That the Law of *Moſes* continued two thouſand years without the leaſt alteration; whereas, we ſee, the Laws of other Commonweals do alter with occaſions; and even thoſe, that pretended their Original from ſome Divinity, to have vaniſhed without trace or memory. * I believe beſides *Zoroaſter*, there were divers others that writ before *Moſes*] who, notwithſtanding have ſuffered the common fate of time. Mens Works have an age like themſelves; and though they out-live their Authors, yet have they a ſtint and period to their duration: This only is a work too hard for the teeth of time, and cannot periſh but in the general *Sect.* 23.

Flames, when all things ſhall confeſs their Aſhes.

Sect. 24. I have heard ſome with deep ſighs lament the loſt lines of *Cicero*; * others with as many groans deplore the combuſtion of the Library of *Alexandria*:] for my own part, I think there be too many in the World, and could with patience behold the urn and aſhes of the *Vatican*, could I, with a few others, recover the periſhed leaves of *Solomon*. *I would not omit a Copy of *Enoch*'s Pillars, had they many nearer Authors than *Joſephus*] or did not reliſh ſomewhat of the Fable. Some men have written more than others have ſpoken; † *Pineda* quotes more Authors in one work, than are neceſſary in a whole World. *Of thoſe three great inventions in *Germany*, there are too which are not without their incommodities.] 'Tis not a melancholy *Utinam* of my own, but the deſires of better heads, that there were a general Synod; not to unite the incompatible difference of Religion, but for the benefit of learning, to reduce it as it lay at firſt, in a few, and ſolid Authors; and to condemn to the fire thoſe ſwarms and millions of *Rhapſodies* begotten only to diſtract and abuſe the weaker judgments of Scholars, and * *to maintain the trade and myſtery of Typographers.*]

† *Pineda* in his *Monarchia Eccleſiaſtica* quotes one thouſand and forty Authors.

Sect. 25. I cannot but wonder with what exception the *Samaritans* could confine their belief to the *Pentateuch*, or five Books of *Moſes*. I am aſhamed at the Rabbinical Interpretation of the *Jews*, upon the Old Teſtament, as much as their defection from the New: and truly it is beyond wonder, how that contemptible and degenerate iſſue of *Jacob*, once ſo devoted to Ethnick Superſtition, and ſo eaſily ſeduced to the Idolatry of their Neighbours, ſhould now in ſuch an obſtinate and peremptory belief adhere unto their own Doctrine, expect impoſſibilities, and in the face and eye of the Church, perſiſt without the leaſt hope of Converſion: This is a vice in them, that were a vertue in us: for obſtinacy in a bad cauſe, is but conſtancy in a good: And herein I muſt accuſe thoſe of my own Religion; for there is not any of ſuch a fugitive Faith, ſuch an unſtable belief, as a Chriſtian; none that do ſo often transform themſelves, not unto ſeveral ſhapes of Chriſtianity, and of the ſame ſpecies, but unto more unnatural and contrary Forms of *Jew* and *Mahometan*; that from the name of Saviour, can deſcend to the bare term of Prophet: and from an old belief that he is come, fall to a new expectation of his coming. It is the promiſe of Chriſt to make us all one Flock: but how and when this union ſhall be, is as obſcure to me as the laſt day. Of thoſe four Members of Religion we hold a ſlender proportion: there are I confeſs ſome new additions; yet ſmall to thoſe which accrew to our adverſaries, and thoſe only drawn from the revolt of *Pagans*, men but of negative Impieties, and ſuch as deny Chriſt, but becauſe they never heard of him: but the Religion of the *Jew* is expreſly againſt the *Chriſtian*, and the *Mahometan* againſt both; for * the *Turk* in the bulk he now ſtands, is beyond all hope of converſion] if he fall aſunder, there may be conceived hopes, but not without ſtrong improbabilities. The *Jew* is obſtinate in all fortunes; the perſecution of fifteen hundred years hath but confirmed them in their Error: They have already endured whatſoever may be inflicted, and have ſuffered in a bad cauſe, even to the condemnation of their enemies. Perſecution is a bad and indirect way to plant Religion; It hath been the unhappy method of angry Devotions, not only to confirm honeſt Religion, but wicked Hereſies, and extravagant Opinions. It was the firſt ſtone and Baſis of our Faith, * none can more juſtly boaſt of perſecutions, and glory in the number and valour of Martyrs;] For to ſpeak properly, thoſe are true and almoſt only examples of fortitude; thoſe that are fetch'd from the Field, or drawn from the actions of the Camp, are not oft-times ſo truly precedents of valour, as audacity; and at the beſt attain but to ſome baſtard-piece of fortitude: * If we ſhall ſtrictly examine the circumſtances and requiſites which *Ariſtotle* requires to true and perfect valour, we ſhall find the name only in his Maſter *Alexander*, and as little in that *Roman* Worthy, *Julius Cæſar*;] and if any, in that eaſie and active way, have done ſo nobly as to deſerve that name, yet in the paſſive and more terrible piece, theſe have ſurpaſſed, and in a more heroical way may claim the honour of that Title. 'Tis not in the power of every

every honeſt Faith to proceed thus far, or paſs to Heaven through the flames; every one hath it not in the full meaſure, nor in ſo audacious and reſolute a temper, as to endure thoſe terrible teſts and trials; who, notwithſtanding, in a peaceable way do truly adore their Saviour, and have (no doubt) a Faith acceptable in the eyes of God.

Sect. 26. Now as all that die in the War, are not termed Souldiers; ſo neither can I properly term all thoſe that ſuffer in matters of Religion, Martyrs. * The Council of *Conſtance* condemns *John Huſs* for an Heretick; the Stories of his own party ſtile him a Martyr.] He muſt needs offend the Divinity of both, that ſays he was neither the one nor the other. There are many (queſtionleſs) Canonized on earth, that ſhall never be Saints in Heaven; and have their names in Hiſtories and Martyrologies, who in the eyes of God are not ſo perfect Martyrs as was * that wiſe Heathen *Socrates*, that ſuffered on a fundamental point of Religion, the Unity of God.] * I have often pitied the miſerable Biſhop that ſuffered in the cauſe of *Antipodes*,] yet cannot chuſe but accuſe him of as much madneſs, for expoſing his living on ſuch a trifle; as thoſe of ignorance and folly, that condemned him. I think my Conſcience will not give me the lye, if I ſay there are not many extant that in a noble way fear the face of death leſs than my ſelf; yet from the moral duty I owe to the Commandment of God, and the natural reſpects that I tender unto the conſervation of my eſſence and being, I would not periſh upon a Ceremony, Politick points, or indifferency: nor is my belief of that untractable temper, as not to bow at their obſtacles, or connive at matters wherein there are not manifeſt impieties: The leaven therefore and ferment of all, not only Civil, but Religious actions, is Wiſdom; without which, to commit our ſelves to the flames, is Homicide, and (I fear) but to paſs through one fire into another.

Sect. 27. That Miracles are ceaſed, I can neither prove, nor abſolutely deny, much leſs define the time and period of their ceſſation: that they ſurvived Chriſt, is manifeſt upon Record of Scripture; that they out-lived the Apoſtles alſo, and were revived at the converſion of Nations, many years after, we cannot deny, if we ſhall not queſtion thoſe Writers whoſe teſtimonies we do not controvert, in points that make for our own opinions; therefore that may have ſome truth in it that is reported by the Jeſuits of their Miracles in the *Indies*; I could wiſh it were true, or had any other teſtimony than their own Pens: they may eaſily believe thoſe Miracles abroad, who daily conceive a greater at home, the tranſmutation of thoſe viſible elements into the Body and Blood of our Saviour: For the converſion of Water into Wine, which he wrought in *Cana*, or what the Devil would have had him done in the Wilderneſs, of Stones into Bread, compared to this, will ſcarce deſerve the name of a Miracle: Though indeed, to ſpeak properly, there is not one Miracle greater than another, they being the extraordinary effects of the Hand of God, to which all things are of an equal facility; and to create the World, as eaſie as one ſingle Creature; for this is alſo a Miracle, not only to produce effects againſt, or above nature, but before Nature; and to create nature, as great a Miracle, as to contradict or tranſcend her. We do too narrowly define the Power of God, reſtraining it to our capacities. * I hold that God can do all things; how he ſhould work contradictions I do not underſtand, yet dare not therefore deny.] * I cannot ſee why the Angel of God ſhould queſtion *Eſdras* to recall the time paſt, if it were beyond his own power: or that God ſhould poſe mortality in that which he was not able to perform himſelf.] I will not ſay God cannot, but he will not perform many things, which we plainly affirm he cannot: this I am ſure is the mannerlieſt propoſition, wherein, notwithſtanding, I hold no Paradox. For ſtrictly his power is the ſame with his will, and they both with all the reſt do make but one God.

Sect. 28. Therefore that Miracles have been, I do believe, that they may yet be wrought by the living, I do not deny: but have no confidence in thoſe which are fathered on the dead; and this hath ever made me ſuſpect the efficacy of reliques, to examine the bones, queſtion the habits and appurtenances

ces of Saints, and even of Christ himself. I cannot conceive why the Cross that *Helena* found, and whereon Christ himself died, should have power to restore others unto life: * I excuse not *Constantine* from a fall off his Horse, or a mischief from his enemies, upon the wearing those nails] on his bridle, which our Saviour bore upon the Cross in his hands: I compute among your *Piæ fraudes*, nor many degrees before consecrated Swords and Roses, that which *Baldwyn* King of *Jerusalem* return'd the *Genoueſe* for their cost and pains in his Wars, to wit, the ashes of *John* the *Baptist*. Those that hold, the sanctity of their Souls doth leave behind a tincture and sacred faculty on their bodies, speak naturally of Miracles, and do not salve the doubt. Now one reason I tender so little Devotion unto Reliques is, I think, the slender and doubtful respect I have always held unto Antiquities: for that indeed which I admire, is far before antiquity, that is, Eternity: and that is, God himself: who though he be styled the Ancient of days, cannot receive the adjunct of Antiquity, who was before the World, and shall be after it, yet is not older than it: for in his years there is no Climacter: his duration is Eternity, and far more venerable than Antiquity.

Sect. 29. But above all things, * I wonder how the curiosity of wiser heads could pass that great and indisputable Miracle, the cessation of Oracles:] and in what swoun their reasons lay, to content themselves, and sit down with such a far-fetcht and ridiculous reason as *Plutarch* alledgeth for it. The *Jews* that can believe the supernatural Solstice of the Sun in the days of *Joshua*, have yet the impudence to deny the Eclipse, which every Pagan confessed, at his death: but for this it is evident beyond all contradiction, † the Devil himself confessed it. Certainly it is not a warrantable curiosity, to examine the verity of Scripture by the Concordance of Humane History, or seek to confirm the Chronicle of *Hester* or *Daniel*, by the authority of *Magasthenes* or *Herodotus*. I confess, I have had an unhappy curiosity this way, * till I laughed my self out of it with a piece of *Justin*, where he delivers that the Children of *Israel* for being scabbed were banished out of *Egypt*.] And truly since I have understood the occurrences of the World, and know in what counterfeiting shapes, and deceitful vizards times present represent on the stage things past: I do believe them little more than things to come. Some have been of my opinion, and endeavoured to write the History of their own lives: wherein *Moses* hath outgone them all, and left not only the story of his life, but as some will have it, of his death also.

† In his Oracle to *Augustus*.

Sect. 30. It is a Riddle to me, how this Story of Oracles hath not worm'd out of the World that doubtful conceit of Spirits and Witches: how so many learned Heads should so far forget their Metaphysicks, and destroy the Ladder and Scale of Creatures, as to question the existence of Spirits: for my part, * I have ever believed, and do now know, that there are Witches:] they that doubt of these, do not only deny them, but Spirits: and are obliquely, and upon consequence a sort not of Infidels, but Atheists. Those that to confute their incredulity desire to see Apparitions, shall questionless never behold any, * nor have the power to be so much as Witches:] the Devil hath them already in a Heresie as Capital as Witchcraft; and to appear to them, were but to convert them. Of all the delusions wherewith he deceives mortality, there is not any that puzleth me more than the Leger-demain of *Changelings*; I do not credit those transformations of reasonable Creatures into Beasts, or that the Devil hath a power to transpeciate a Man into a Horse, who tempted Christ (as a trial of his Divinity) to convert but stones into bread. I could believe that Spirits use with man the act of carnality, and that in both Sexes; I conceive they may assume, steal, or contrive a body, wherein there may be action enough to content decrepit Lust, or Passion to satisfie more active veneries; yet in both, without a possibility of generation: and therefore that opinion that Antichrist should be born of the Tribe of *Dan* * by conjunction with the Devil] is ridiculous, and a conceit fitter for a Rabbin, than a Christian. I hold that the Devil doth really possess some men, the Spirit of Melancholy others, the Spirit of Delusion others; that as the Devil is concealed and denied by some, so God and good

Angels

Angels are pretended by others, whereof the late defection of the Maid of *Germany* hath left a pregnant example.

Sect. 31. Again, I believe that all that uſe Sorceries, Incantations, and ſpells, are not Witches, or as we term them, Magicians; I conceive there is a traditional Magick, not learned immediately from the Devil, but at ſecond hand from his Scholars, who having once the ſecret betrayed are able and do empirically practiſe without his advice, they both proceeding upon the principles of Nature; where actives aptly conjoyned to diſpoſed paſſives, will under any Maſter produce their effects. Thus I think at firſt a great part of Philoſophy was Witchcraft, which being afterward derived to one another, proved but Philoſophy, and was indeed no more but the honeſt effects of Nature: What invented by us, is Philoſophy; learned from him, is Magick. We do ſurely owe the diſcovery of many ſecrets to the diſcovery of good and bad Angels. I could never paſs that ſentence of *Paracelſus*, without an aſterisk, or annotation; **Aſcendens conſtellatum multa revelat quarentibus magnalia naturæ*, i. e. *opera Dei*. I do think that many myſteries aſcribed to our own inventions have been the courteous revelations of Spirits; for thoſe noble eſſences in Heaven bear a friendly regard unto their fellow Natures on Earth; and therefore believe that thoſe many prodigies and ominous prognoſticks, which fore-run the ruines of States, Princes, and private perſons, are the charitable premonitions of good Angels; which more careleſs enquiries term but the effects of Chance and Nature.

*Thereby is meant our good Angel appointed us from our nativity.

Sect. 32. Now beſides theſe particular and divided Spirits, there may be (for ought I know) an univerſal and common Spirit to the whole World. It was the opinion of *Plato*, and it is yet of the *Hermetical* Philoſophers: if there be a common nature that unites and tyes the ſcattered and divided individuals into one ſpecies, why may there not be one that unites them all? However I am ſure there is a common Spirit that playes within us, yet makes no part of us; and that is, the Spirit of God, the fire and ſcintillation of that noble and mighty Eſſence, which is the life and radical heat of Spirits, and thoſe eſſences that know not the vertue of the Sun; a fire quite contrary to the fire of hell: this is that gentle heat that brooded on the waters, and in ſix dayes hatched the world; this is that irradiation that diſpels the miſts of Hell, the Clouds of horror, fear, ſorrow, deſpair; and preſerves the region of the mind in ſerenity: whoſoever feels not the warm gale and gentle ventilation of this Spirit, (though I feel his pulſe) I dare not ſay he lives; for truely without this to me there is no heat under the Tropick; nor any light, though I dwelt in the body of the Sun.

As when the labouring Sun hath wrought his track
Up to the top of lofty Cancer's *back,*
The Icy Ocean cracks, the frozen Pole
Thaws with the heat of the Celeſtial coal;
So when thy abſent beams begin't impart
Again a Solſtice on my frozen heart,
My winter's o're, my drooping ſpirits ſing,
And every part revives into a Spring.
But if thy quickning beams a while decline,
And with their light bleſs not this orb of mine,
A chilly froſt ſurprizeth every member,
And in the midſt of June *I feel* December.
O how this earthly temper doth debaſe
The noble ſoul, in this her humble place!
Whoſe wingy nature ever doth aſpire
To reach that place whence firſt it took its fire.
Theſe flames I feel, which in my heart do dwell,
Are not thy beams, but take their fire from hell:
O quench them all, and let thy light divine
Be as the Sun to this poor Orb of mine;
And to thy ſacred Spirit convert thoſe fires,
Whoſe earthly fumes choak my devout aſpires.

Therefore

Sect. 33. Therefore for Spirits, I am ſo far from denying their exiſtence, that I could eaſily believe, that not only whole Countries, but particular perſons have their Tutelary and Guardian Angels: *It is not a new opinion of the Church of *Rome*, but an old one of *Pythagoras* and *Plato*;] there is no hereſie in it, and if not manifeſtly defin'd in Scripture, yet it is an opinion of a good and wholſome uſe in the courſe and actions of a mans life, and would ſerve as an *Hypotheſis* to ſalve many doubts, whereof common Philoſophy affordeth no ſolution: Now if you demand my opinion and Metaphyſicks of their natures, I confeſs them very ſhallow, moſt of them in a negative way, like that of God; or in a comparative, between our ſelves and fellow creatures; for there is in this Univerſe a Stair, or manifeſt Scale of creatures, riſing not diſorderly, or in confuſion, but with a comely method and proportion: between Creatures of meer exiſtence, and things of life, there is a large diſproportion of nature; between plants and animals, or creatures of ſenſe, a wider difference: between them and Man, a far greater: and if the proportion hold on, between Man and Angels there ſhould be yet a greater. We do not comprehend their natures, who retain the firſt definition of *Porphyry*, and diſtinguiſh them from our ſelves by immortality: for before his Fall, Man alſo was Immortal: yet muſt we needs affirm that he had a different eſſence from the Angels: having therefore no certain knowledg of their Nature, 'tis no bad method of the Schools, whatſoever perfection we find obſcurely in our ſelves, in a more compleat and abſolute way to aſcribe unto them. I believe they have an extemporary knowledg, and upon the firſt motion of their reaſon do what we cannot without ſtudy or deliberation: that they know things by their forms, and define by ſpecifical difference what we deſcribe by accidents and properties: and therefore probabilities to us may be demonſtrations unto them: That they have knowledg not only of the ſpecifical, but numerical forms of individuals, and underſtand by what reſerved difference each ſingle *Hypoſtaſis* (beſides the relation to its ſpecies) becomes its numerical ſelf. That as the Soul hath a power to move the Body it informs, ſo there's a faculty to move any, though inform none: ours upon reſtraint of time, place and diſtance: but that inviſible hand that conveyed *Habakkuk* to the Lions Den, or *Philip* to *Azotus*, infringeth this rule, and hath a ſecret conveyance, wherewith mortality is not acquainted: if they have that intuitive knowledg, whereby as in reflexion they behold the thoughts of one another, I cannot peremptorily deny but they know a great part of ours. They that to refute the Invocation of Saints, have denied that they have any knowledg of our affairs below, have proceeded too far, and muſt pardon my opinion, till I can throughly anſwer that piece of Scripture, *At the converſion of a Sinner the Angels in Heaven rejoyce.* *I cannot with thoſe in that great Father ſecurely interpret the work of the firſt day, *Fiat lux*, to the creation of Angels,] though (I confeſs) there is not any creature that hath ſo near a glympſe of their nature, as light in the Sun and Elements: we ſtile it a bare accident, but * where it ſubſiſts alone, 'tis a ſpiritual Subſtance, and may be an Angel:] in brief, conceive light inviſible, and that is a Spirit.

Sect. 34. Theſe are certainly the Magiſterial and Maſter-pieces of the Creator, the Flower, or (as we may ſay) the beſt part of nothing, actually exiſting, what we are but in hopes, and probability: we are only that amphibious piece between a corporal and ſpiritual Eſſence, that middle form that links thoſe two together, and makes good the method of God and Nature, that jumps not from extreams, but unites the incompatible diſtances by ſome middle and participating natures: that we are the breath and ſimilitude of God, it is indiſputable and upon Record of Holy Scripture: but to call our ſelves a Microcoſm, or little World, I thought it only a pleaſant Trope of Rhetorick, till my near judgment and ſecond thoughts told me there was a real truth therein: for firſt we are a rude Maſs, and in the rank of Creatures, which only are, and have a dull kind of being not yet priviledged with life, or preferred to ſenſe or reaſon: next we live the life of Plants, the life of Animals, the life of Men, and at laſt the life of Spirits, running on in one myſterious Nature thoſe

five

five kinds of existences, which comprehend the Creatures not only of the World, but of the Universe; thus is man that great and true *Amphibium*, whose nature is disposed to live not only like other Creatures in divers Elements, but in divided and distinguished Worlds: for though there be but one to sense, there are two to reason; the one visible, the other invisible, whereof *Moses* seems to have left description, and of the other so obscurely, that some parts thereof are yet in controversie; and truly for the first Chapter of *Genesis*, I must confess a great deal of obscurity; though Divines have to the power of humane reason endeavoured to make all go in a literal meaning, yet those allegorical interpretations are also probable, and perhaps the mystical method of *Moses* bred up in the Hieroglyphical School of the *Ægyptians*.

Now for that immaterial World, methinks we need not wander so far as the first moveable; for even in this material Fabrick the Spirits walk as freely exempt from the affection of time, place, and motion, as beyond the extreamest circumference: do but extract from the corpulency of Bodies, or resolve things beyond their first matter, and you discover the habitation of Angels, which if I call the ubiquitary, and omnipresent essence of God, I hope I shall not offend Divinity: for before the Creation of the World, God was really all things. For the Angels he created no new World, or determinate mansion, and therefore they are every where where is his Essence, and do live at a distance even in himself: that God made all things for man, is in some sense true, yet not so far as to subordinate the Creation of those purer Creatures unto ours, though as ministring Spirits they do, and are willing to fulfil the will of God in these lower and sublunary affairs of man: God made all things for himself, and it is impossible he should make them for any other end than his own Glory; it is all he can receive, and all that is without himself: for honour being an external adjunct, and in the Honourer rather than in the Person honoured, it was necessary to make a Creature, from whom he might receive this Homage, and that is in the other World, Angels; in this, *Man*; which when we neglect, we forget the very end of our Creation, and may justly provoke God, not only to repent that he hath made the world, but that he hath sworn he would not destroy it. That there is but one World, is a conclusion of Faith. *Aristotle* with all his Philosophy hath not been able to prove it, and as weakly that the World was eternal; that dispute much troubled the Pen of the ancient Philosophers, * but *Moses* decided that question, and all is salved with the new term of a Creation,] that is, a production of something out of nothing; and what is that? Whatsoever is opposite to something, or more exactly, that which is truly contrary unto God: for he only is, all others have an existence with dependency, and are something but by a distinction; and herein is Divinity conformant unto Philosophy, and Generation not only founded on contrarieties, but also Creation; God being all things, is contrary unto nothing, out of which were made all things, and so nothing became something; and *Omneity* informed *Nullity* into an Essence. *Sect.* 35.

The whole Creation is a Mystery, and particularly that of Man; at the blast of his mouth were the rest of the Creatures made, and at his bare word they started out of nothing: but in the frame of Man (as the Text describes it) he played the sensible Operator, and seemed not so much to create, as make him; when he had separated the materials of other Creatures, there consequently resulted a form and Soul; but having raised the Walls of man, he was driven to a second and harder Creation of a substance like himself, an incorruptible and immortal Soul. For these two affections we have the Philosophy and opinion of the Heathens, the flat affirmative of *Plato*, and not a negative from *Aristotle*: there is another scruple cast in by Divinity (concerning its production) much disputed in the *German* Auditories, and with that indifferency and equality of Arguments, as leave the controversie undetermined. I am not of *Paracelsus*'s mind, that boldly delivers a receit to make a man without Conjunction, yet cannot but wonder at the multitude of Heads that do deny traduction, having no other Argument to confirm their belief, *Sect.* 36.

belief, than that Rhetorical ſentence, and *Antimetatheſis* of *Auguſtin*, *Creando infunditur, infundendo creatur*: either opinion will conſiſt well enough with Religion: yet I ſhould rather incline to this, did not one objection haunt me, not wrung from ſpeculations and ſubtilties but from common ſenſe and obſervation; not pickt from the Leaves of any Author, but bred amongſt the Weeds and Tares of my own Brain; And this is a concluſion from the equivocal and monſtrous productions in the copulation of a Man with a Beaſt: for if the Soul of man be not tranſmitted, and transfuſed in the ſeed of the Parents, why are not thoſe productions meerly Beaſts, but have alſo an impreſſion and tincture of reaſon in as high a meaſure, as it can evidence it ſelf in thoſe improper Organs? Nor truly can I peremptorily deny that the Soul in this her ſublunary eſtate, is wholly, and in all acceptions inorganical; but that for the performance of her ordinary actions, is required not only a ſymmetry and proper diſpoſition of Organs, but a Craſis and temper correſpondent to its operations; yet is not this Maſs of Fleſh and viſible ſtructure the inſtrument and proper Corps of the Soul, but rather of Senſe, and that the hand of Reaſon. * In our Study of Anatomy there is a Maſs of myſterious Philoſophy, and ſuch as reduced the very Heathens to Divinity;] yet amongſt all thoſe rare diſcoveries, and curious pieces I find in the Fabrick of man, I do not ſo much content my ſelf, as in that I find not, that is, no Organ or Inſtrument for the rational Soul; for in the Brain, which we term the ſeat of Reaſon, there is not any thing of moment more than I can diſcover in the Crany of a Beaſt: and this is a ſenſible, and no inconſiderable argument of the inorganity of the Soul, at leaſt in that Senſe we uſually ſo receive it. Thus we are men, and we know not how; there is ſomething in us that can be without us, and will be after us, though it is ſtrange that it hath no Hiſtory, what it was before us, nor cannot tell how it entred in us.

Sect. 37. Now for theſe Walls of Fleſh, wherein the Soul doth ſeem to be immured before the Reſurrection, it is nothing but an elemental compoſition, and a Fabrick that muſt fall to Aſhes: *All Fleſh is Graſs*, is not only metaphorically, but literally true; for all thoſe Creatures we behold are but the Herbs of the Field, digeſted into Fleſh in them, or more remotely carnified in our ſelves. Nay further, we are what we all abhor, *Anthropophagi* and Cannibals, devourers not only of men, but of our ſelves; and that not in an allegory, but a poſitive truth: for all this Maſs of Fleſh which we behold, came in at our mouths; this frame we look upon, hath been upon our Trenchers; in brief, we have devour'd our ſelves. * I cannot believe the wiſdom of *Pythagoras* did ever poſitively, and in a literal ſenſe, affirm his *Metempſychoſis*,] or impoſſible tranſmigration of the Souls of *Men* into Beaſts: of all Metamorphoſes, or Tranſmigrations, I believe only one, that is of *Lot*'s Wife; for that of *Nebuchadonoſor* proceeded not ſo far; in all others I conceive there is no further verity than is contained in their implicite ſenſe and morality. I believe that the whole frame of a Beaſt doth periſh, and is left in the ſame ſtate after death, as before it was materialled unto life; that the Souls of men know neither contrary nor corruption; that they ſubſiſt beyond the body, and outlive death by the priviledge of their proper natures, and without a Miracle; that the Souls of the faithful, as they leave Earth, take poſſeſſion of Heaven: that thoſe Apparitions and Ghoſts of departed perſons are not the wandring Souls of men, but the unquiet walks of Devils, prompting and ſuggeſting us unto miſchief, bloud, and villany, inſtilling, and ſtealing into our hearts; that the bleſſed Spirits are not at reſt in their Graves, but wander, ſollicitous of the affairs of the world: but that thoſe Phantaſms appear often, and do frequent Cœmeteries, Charnel-houſes, and Churches, it is becauſe thoſe are the dormitories of the dead, where the Devil like an inſolent Champion beholds with pride the ſpoils and Trophies of his Victory in *Adam*.

Sect. 38. This is that diſmal conqueſt we all deplore, that makes us ſo often cry (O) *Adam, quid feciſti?* I thank God I have not thoſe ſtrait ligaments, or narrow obligations to the world, as to dote on life, or be convulſt and

tremble

tremble at the name of death: Not that I am insensible of the dread and horrour thereof; or by raking into the Bowels of the deceased, continual sight of Anatomies, Skeletons, or Cadaverous reliques, like Vespilloes, or Grave-makers, I am become stupid, or have forgot the apprehension of Mortality; but that marshalling all the horrours, and contemplating the extremities thereof, I find not any thing therein able to daunt the courage of a man, much less a well resolved Christian. And therefore am not angry at the errour of our first Parents, or unwilling to bear a part of this common fate, and like the best of them to dye, that is, to cease to breathe, to take a farewel of the Elements; to be a kind of nothing for a moment, to be within one instant of a Spirit. When I take a full view and circle of my self without this reasonable moderator, and equal piece of Justice, Death, I do conceive my self the miserablest person extant; were there not another life that I hope for, all the vanities of this world should not intreat a moments breath from me: could the Devil work my belief to imagine I could never dye, I would not outlive that very thought. I have so abject a conceit of this common way of existence, this retaining to the Sun and Elements, I cannot think this is to be a man, or to live according to the dignity of humanity: in expectation of a better, I can with patience embrace this life, yet in my best meditations do often defie death: I honour any man that contemns it, nor can I highly love any that is afraid of it: this makes me naturally love a Souldier, and honour those tattered and contemptible Regiments, that will dye at the command of a Sergeant. For a Pagan there may be some motives to be in love with life; but for a Christian to be amazed at death, I see not how he can escape this Dilemma, That he is too sensible of this life, or hopeless of the life to come.

Some Divines count *Adam* 30. years old at his Creation, because they *Sect.* 39. suppose him created in the perfect age and stature of man; and surely we are all out of the computation of our age, and every man is some months elder than he bethinks him; for we live, move, have a being, and are subject to the actions of the Elements, and the malice of diseases, in that other world, the truest Microcosm, the womb of our Mother; for besides that general and common existence we are conceived to hold in our Chaos, and whilst we sleep within the bosome of our Causes, we enjoy a being and life in three distinct worlds, wherein we receive most manifest graduations. In that obscure world, and womb of our mother, our time is short, computed by the Moon; yet longer than the dayes of many creatures that behold the Sun, our selves being not yet without life, sense, and reason; though for the manifestation of its actions, it awaits the opportunity of objects, and seems to live there but in its root and soul of Vegetation: entring afterwards upon the Scene of the world, we rise up and become another Creature, performing the reasonable actions of man, and obscurely manifesting that part of Divinity in us, but not in complement and perfection, till we have once more cast our secondine, that is, this slough of Flesh, and are delivered into the last World, that is, that ineffable place of *Paul*, that proper *ubi* of Spirits. The smattering I have of the Philosophers Stone (which is something more than the perfect exaltation of Gold) hath taught me a great deal of Divinity, and instructed my belief, how that immortal spirit and incorruptible substance of my soul may lye obscure, and sleep a while within this house of flesh. Those strange and mystical transmigrations that I have observed in Silk-worms, turned my Philosophy into Divinity. There is in these works of nature, which seem to puzle reason, something Divine, and hath more in it than the eye of a common spectator doth discover.

I am naturally bashful; nor hath conversation, age, or travel, been able *Sect.* 40. to effront, or enharden me; yet I have one part of modesty, which I have seldome discovered in another, that is, (to speak truly) I am not so much afraid of death, as ashamed thereof; 'tis the very disgrace and ignominy of our natures, that in a moment can so disfigure us, that our neerest Friends, Wife and Children stand afraid and start at us. The Birds and Beasts of

the Field, that before in a natural fear obeyed us, forgetting all Allegiance, begin to prey upon us. This very conceit hath in a tempeſt diſpoſed and left me willing to be ſwallowed up in the Abyſs of waters, wherein I had periſhed unſeen, unpityed, without wondering Eyes, Tears of pity, Lectures of mortality, and none had ſaid, *Quantum mutatus ab illo!* Not that I am ſhamed of the Anatomy of my parts, or can accuſe Nature for playing the bungler in any part of me, or my own vitious life for contracting any ſhameful diſeaſe upon me, whereby I might not call my ſelf as wholeſome a morſel for the Worms as any.

Sect. 41. Some upon the courage of a fruitful iſſue, wherein, as in the trueſt Chronicle, they ſeem to outlive themſelves, can with greater patience away with death. This conceit and counterfeit ſubſiſting in our progenies, ſeems to me a meer fallacy, unworthy the deſires of a man, that can but conceive a thought of the next World; who, in a nobler ambition, ſhould deſire to live in his ſubſtance in Heaven, rather than his name and ſhadow in the Earth. And therefore at my death I mean to take a total adieu of the world, not caring for a Monument, Hiſtory, or Epitaph, not ſo much as the bare memory of my Name to be found any where, but in the univerſal Regiſter of God. I am not yet ſo Cynical, as to approve the *Teſtament of *Diogenes*, nor do I altogether follow that *Rodomontado* of *Lucan*;

* Who willed his Friend not to bury him, but hang him up with a Staff in his hand to fright away the Crows.

——— *Cœlo tegitur, qui non habet urnam.*

He that unburied lies, wants not his Herſe,
For unto him a Tomb's the Univerſe.

But commend in my calmer judgement, thoſe ingenuous intentions that deſire to ſleep by the Urns of their Fathers, and ſtrive to go the neareſt way unto corruption. *I do not envy the temper of Crows and Daws] nor the numerous and weary dayes of our Fathers before the Flood. If there be any truth in Aſtrology, I may out-live a Jubilee; as yet I have not ſeen one revolution of *Saturn*, nor hath my Pulſe beat thirty years, and yet excepting one, have ſeen the Aſhes, and left under ground, all the Kings of *Europe*; have been contemporary to three Emperours, four Grand Signiours, and as many Popes: methinks I have out-lived my ſelf, and begin to be weary of the Sun; I have ſhaken hands with delight in my warm blood and Canicular days; I perceive I do anticipate the vices of age, the world to me is but a dream or mock-ſhow, and we all therein but Pantalones and Anticks, to my ſeverer contemplations.

Sect. 42. It is not, I confeſs, an unlawful Prayer to deſire to ſurpaſs the days of our Saviour, or wiſh to out-live that age wherein he thought fitteſt to dye; yet if (as Divinity affirms) there ſhall be no gray Hairs in Heaven, but all ſhall riſe in the perfect ſtate of Men, we do but out-live thoſe perfections in this World, to be recalled unto them by a greater Miracle in the next, and run on here but to be retrograde hereafter. Were there any hopes to out-live vice, or a point to be ſuper-annuated from ſin, it were worthy our Knees to implore the days of *Methuſelah*. But age doth not rectifie, but incurvate our natures, turning bad diſpoſitions into worſer habits, and (like Diſeaſes) brings on incurable vices for every day as we grow weaker in age, we grow ſtronger in ſin; and the number of our days doth but make our ſins innumerable. The ſame vice committed at ſixteen, is not the ſame, though it agrees in all other circumſtances, at forty, but ſwells and doubles from the circumſtance of our ages, wherein, beſides the conſtant and inexcuſable habit of tranſgreſſing, the maturity of our judgment cuts off pretence unto excuſe or pardon: every ſin the oftner it is committed, the more it acquireth in the quality of evil; as it ſucceeds in time, ſo it proceeds in degrees of badneſs; for as they proceed they never multiply, and like Figures in Arithmetick, the laſt ſtands for more than all that went before it: And though I think no man can live well once, but he that could live twice, yet for my own part I would not live over my hours paſt, or begin again the thred of my dayes: *not upon *Cicero*'s ground, becauſe I have lived them well, but for fear I ſhould live

live them worſe:] I find my growing Judgment daily inſtruct me how to be better, but my untamed affections and confirmed vitioſity makes me daily do worſe; I find in my confirmed age the ſame ſins I diſcovered in my youth; I committed many then becauſe I was a Child; and becauſe I commit them ſtill, I am yet an Infant. Therefore I perceive a man may be twice a Child, before the dayes of dotage; * and ſtand in need of *Æſon*'s Bath before threeſcore.]

And truely there goes a great deal of providence to produce a mans life unto threeſcore; there is more required than an able temper for thoſe years; though the radical humour contain in it ſufficient Oyl for ſeventy, yet I perceive in ſome it gives no light paſt thirty: men aſſign not all the cauſes of long life, that write whole Books thereof. They that found themſelves on the radical Balſom, or vital Sulphur of the parts, determine not why *Abel* lived not ſo long as *Adam*. There is therefore a ſecret glome or bottom of our dayes; 'twas his wiſdom to determine them, but his perpetual and waking providence that fulfils and accompliſheth them, wherein the Spirits, our ſelves, and all the Creatures of God in a ſecret and diſputed way do execute his Will. Let them not therefore complain of immaturity that die about thirty; they fall but like the whole world, whoſe ſolid and well-compoſed ſubſtance muſt not expect the duration and period of its conſtitution: when all things are compleated in it, its age is accompliſhed; and the laſt and general Fever may as naturally deſtroy it before ſix thouſand, as me before forty; there is therefore ſome other hand that twines the thread of Life than that of Nature: we are not only ignorant in Antipathies and occult qualities; our ends are as obſcure as our beginnings; the line of our dayes is drawn by Night, and the various effects therein by a Pencil that is inviſible; wherein though we confeſs our ignorance, I am ſure we do not err if we ſay it is the hand of God. *Sect.* 43.

I am much taken with two Verſes of *Lucan*, ſince I have been able not only as we do at School, to conſtrue, but underſtand: *Sect.* 44.

Victuróſque Dei celant ut vivere durent,
Felix eſſe mori.

We're all deluded, vainly ſearching ways
To make us happy by the length of days;
For cunningly to make's protract this breath,
The Gods conceal the happineſs of death.

There be many excellent ſtrains in that Poet, wherewith his Stoical genius hath liberally ſupplied him: and truly there are ſingular pieces in the Philoſophy of *Zeno*, and doctrine of the Stoicks, which I perceive delivered in a Pulpit paſs for current Divinity: yet herein are they in extreams, that can allow a man to be his own *Aſſaſſine*, and ſo highly * extoll the end and Suicide of *Cato*;] this is indeed not to fear death, but yet to be afraid of life. It is a brave act of valour to contemn death; but where life is more terrible than death, it is then the trueſt valour to dare to live; and herein Religion hath taught us a noble example: For all the valiant acts of *Curtius*, *Scævola*, or *Codrus*, do not parallel, or match that one of *Job*; and ſure there is no torture to the rack of a diſeaſe, nor any Ponyards in death it ſelf, like thoſe in the way or prologue to it. * *Emori nolo, ſed me eſſe mortuum nihil curo*;] I would not die, but care not to be dead. Were I of *Cæſar*'s Religion, I ſhould be of his deſires, and wiſh rather to go off at one blow, than to be ſawed in pieces by the grating torture of a diſeaſe. Men that look no farther than their out-ſides, think health an appurtenance unto life, and quarrel with their conſtitutions for being ſick; but I that have examined the parts of Man, and know upon what tender Filaments that Fabrick hangs, do wonder that we are not alwayes ſo; and conſidering the thouſand doors that lead to death, do thank my God that we can die but once. 'Tis not only the miſchief of diſeaſes, and the villany of Poiſons, that make an end of us; we vainly accuſe the fury of Guns,

Guns, and the new inventions of death; it is in the power of every hand to deſtroy us, and we are beholden unto every one we meet, he doth not kill us. There is therefore but one comfort left, that though it be in the power of the weakeſt arm to take away life, it is not in the ſtrongeſt to deprive us of death: God would not exempt himſelf from that; the miſery of immortality in the Fleſh he undertook not; that was in it immortal. Certainly there is no happineſs within this circle of fleſh, nor is it in the Opticks of theſe eyes to behold felicity; the firſt day of our Jubilee is death; the Devil hath therefore failed of his deſires; we are happier with death than we ſhould have been without it: there is no miſery but in himſelf, where there is no end of miſery; and ſo indeed in his own ſenſe, the Stoick is in the right. He forgets that he can die who complains of miſery; we are in the power of no calamity while death is in our own.

Sect. 45. Now beſides this literal and poſitive kind of death, there are others whereof Divines make mention, and thoſe I think, not meerly Metaphorical, as mortification, dying unto ſin and the world; therefore, I ſay, every man hath a double Horoſcope, one of his Humanity, his Birth; another of his Chriſtianity, his Baptiſm; and from this do I compute or calculate my Nativity, not reckoning thoſe *Horæ combuſtæ* and odd days, or eſteeming my ſelf any thing, before I was my Saviour's, and inrolled in the Regiſter of Chriſt: Whoſoever enjoys not this life, I account him but an Apparition, though he wear about him the ſenſible affections of Fleſh. In theſe moral acceptions, the way to be immortal is to die daily; nor can I think I have the true Theory of death, when I contemplate a Skull, or behold a Skeleton with thoſe vulgar imaginations it caſts upon us; I have therefore inlarged that common *Memento mori*, into a more Chriſtian *memorandum*, *Memento quatuor Noviſſima*, thoſe four inevitable points of us all, Death, Judgment, Heaven and Hell. Neither did the contemplations of the Heathens reſt in their Graves, without a further thought of *Rhadamanth* or ſome judicial proceeding after death, though in another way, and upon ſuggeſtion of their natural reaſons. I cannot but marvel from what *Sibyl* or Oracle they ſtole the prophecy of the worlds deſtruction by fire, or whence *Lucan* learned to ſay,

> *Communis mundo ſupereſt rogus, oſſibus aſtra*
> *Miſturus*———
>
> *There yet remains to th' world one common Fire,*
> *Wherein our Bones with Stars ſhall make one pyre.*

I believe the World grows near its end, yet is neither old nor decayed, nor will ever periſh upon the ruines of its own Principles. As the work of Creation was above nature, ſo is its adverſary annihilation; without which the World hath not its end, but its mutation. Now what force ſhould be able to conſume it thus far, without the breath of God, which is the trueſt conſuming flame, my Philoſophy cannot inform me. Some believe there went not a Minute to the Worlds Creation, nor ſhall there go to its deſtruction; thoſe ſix dayes ſo punctually deſcribed, make not to them one moment; but rather ſeem to manifeſt the method and Idea of the great work of the intellect of God, than the manner how he proceeded in its operation. I cannot dream that there ſhould be at the laſt day any ſuch Judicial proceeding, or calling to the Bar, as indeed the Scripture ſeems to imply, and the literal Commentators do conceive: for unſpeakable myſteries in the Scriptures are often delivered in a vulgar and illuſtrative way; and being written unto Man, are delivered, not as they truly are, but as they may be underſtood; wherein notwithſtanding, the different interpretations according to different capacities, may ſtand firm with our devotion, nor be any way prejudicial to each ſingle edification.

Sect. 46. Now to determine the day and year of this inevitable time, is not only convincible and Statute-madneſs, but alſo manifeſt impiety: * How ſhall we intepret *Elias*'s 6000 years,] or imagine the ſecret comunicated to a Rabbi,

Rabbi, which God hath denyed unto his Angels? It had been an excellent quære to have poſed the Devil of *Delphos*, and muſt needs have forced him to ſome ſtrange amphibology; it hath not only mocked the predictions of ſundry Aſtrologers in Ages paſt, but the Prophecies of many melancholy Heads in theſe preſent; who neither underſtanding reaſonably things paſt or preſent, pretend a knowledge of things to come; Heads ordained only to manifeſt the incredible effects of melancholy, and to fulfil old prophecies, rather than be the Authors of new. [In thoſe days there ſhall come Wars and Rumors of Wars,] to me ſeems no Prophecy, but a conſtant truth in all times verified ſince it was pronounced: There ſhall be ſigns in the Moon and Stars; how comes he then like a Thief in the night, when he gives an *Item* of his coming? That common ſign drawn from the Revelation of Antichriſt, is as obſcure as any; in our common compute he hath been come theſe many years; but for my own part to ſpeak freely, I am half of opinion that Antichriſt is the Philoſophers Stone in Divinity, for the diſcovery and invention whereof, though there be preſcribed Rules, and probable inductions, yet hath hardly any man attained the perfect diſcovery thereof. That general opinion that the world grows near its end, hath poſſeſſed all Ages paſt as nearly as ours; I am afraid that the Souls that now depart, cannot eſcape that lingring expoſtulation of the Saints under the Altar, *Quouſque, Domine? How long, O Lord?* and groan in the expectation of the great Jubilee.

In thoſe days there ſhall come Lyars and falſe Prophets.

This is the day that muſt make good that great Attribute of God, his Juſtice; that muſt reconcile thoſe unanſwerable doubts that torment the wiſeſt underſtandings; and reduce thoſe ſeeming inequalities and reſpective diſtributions in this world, to an equality and recompenſive Juſtice in the next. This is that one day, that ſhall include and comprehend all that went before it; wherein, as in the laſt Scene, all the Actors muſt enter, to compleat and make up the Cataſtrophe of this great piece. This is the day whoſe memory hath only power to make us honeſt in the dark, and to be vertuous without a witneſs. * *Ipſa ſui pretium virtus ſibi,*] that Vertue is her own reward, is but a cold Principle, and not able to maintain our variable reſolutions in a conſtant and ſetled way of goodneſs. I have practiſed * that honeſt artifice of *Seneca*,] and in my retired and ſolitary imaginations, to detain me from the foulneſs of vice, have fancied to my ſelf the preſence of my dear and worthieſt Friends, before whom I ſhould loſe my Head rather than be vitious; yet herein I found that there was nought but moral honeſty, and this was not to be vertuous for his ſake who muſt reward us at laſt. * I have tryed if I could reach that great reſolution of his, to be honeſt without a thought of Heaven or Hell;] and indeed I found upon a natural inclination, an inbred loyalty unto vertue, that I could ſerve her without a livery, yet not in that reſolved and venerable way, but that the frailty of my nature, upon an eaſie temptation, might be induced to forget her. The life therefore and Spirit of all our Actions. is the Reſurrection, and ſtable apprehenſion that our Aſhes ſhall enjoy the Fruit of our pious endeavours; without this, all Religion is a Fallacy, and thoſe impieties of *Lucian*, *Euripides*, and *Julian*, are no blaſphemies, but ſubtle verities, * and Atheiſts have been the only Philoſophers.]

Sect. 47.

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How ſhall the dead ariſe, is no queſtion of my Faith; to believe only poſſibilities, is not Faith, but meer Philoſophy: many things are true in Divinity, which are neither inducible by Reaſon, nor confirmable by Senſe; and many things in Philoſophy confirmable by Senſe, yet not inducible by Reaſon. Thus it is impoſſible by any ſolid or demonſtrative reaſons to perſwade a man to believe the converſion of the Needle to the North; though this be poſſible and true, and eaſily credible, upon a ſingle experiment unto the ſenſe. I believe that our eſtranged and divided Aſhes ſhall unite again; that our ſeparated Duſt after ſo many Pilgrimages and transformations into the parts of Minerals, Plants, Animals, Elements, ſhall at the Voice of God return into their primitive ſhapes, and joyn again to make up their primary and predeſtinate forms. As at the Creation there

Sect. 48.

was

was a separation of that confused Mass into its species; so at the destruction thereof there shall be a separation into its distinct Individuals. As at the Creation of the World, all the distinct species that we behold, lay involved in one Mass, till the fruitful Voice of God separated this united multitude into its several species: so at the last day, when those corrupted reliques shall be scattered in the Wilderness of Forms, and seem to have forgot their proper habits, *God by a powerful Voice shall command them back into their proper shapes,] and call them out by their single individuals: Then shall appear the fertility of *Adam*, and the Magick of that Sperm that hath dilated into so many millions. I have often beheld as a Miracle, that artificial Resurrection and Revivification of *Mercury*, how being mortified into a thousand shapes, it assumes again its own, and returns into its numerical self. Let us speak naturally, and like Philosophers, the forms of alterable bodies in these sensible corruptions perish not; nor as we imagine, wholly quit their mansions, but retire and contract themselves into their secret and unaccessible parts, where they may best protect themselves from the Action of their Antagonist. A Plant or Vegetable consumed to Ashes to a contemplative and School-Philosopher seems utterly destroyed, and the form to have taken his leave for ever: But to a sensible Artist the forms are not perished, but withdrawn into their incombustible part, where they lye secure from the Action of that devouring Element. This is made good by experience, which can from the Ashes of a Plant revive the Plant, and from its Cinders recall it into its Stalk and Leaves again. What the Art of man can do in these inferiour pieces, what blasphemy is it to affirm the Finger of God cannot do in these more perfect and sensible structures? This is that mystical Philosophy, from whence no true Scholar becomes an Atheist, but from the visible effects of nature grows up a real Divine, and beholds not in a Dream, as *Ezekiel*, but in an ocular and visible object, the Types of his Resurrection.

Sect. 49. Now the necessary Mansions of our restored selves, are those two contrary and incompatible places we call Heaven and Hell; to define them, or strictly to determine what and where these are, surpasseth my Divinity. That elegant Apostle which seemed to have a glimpse of Heaven, hath left but a negative description thereof; *which neither Eye hath seen, nor Ear hath heard, nor can enter into the Heart of Man*: he was translated out of himself to behold it; but being returned into himself could not express it. Saint *John*'s description by Emeralds, Chrysolites and pretious Stones, is too weak to express the material Heaven we behold. Briefly therefore, where the Soul hath the full measure, and the complement of happiness; where the boundless Appetite of that Spirit remains compleatly satisfied that it can neither desire addition nor alteration, that I think is truly Heaven: and this can only be in the enjoyment of that Essence, whose infinite goodness is able to terminate the desires of its self, and the unsatiable wishes of ours; where-ever God will thus manifest himself, there is Heaven, though within the circle of this sensible World. Thus the Soul of man may be in Heaven any where, even within the limits of his own proper body; and when it ceaseth to live in the body, it may remain in its own Soul, that is its Creator. And thus we may say, That Saint *Paul*, whether in the body or out of the body, was yet in Heaven. To place it in the Empyreal, or beyond the tenth Sphere, is to forget the worlds destruction; for when this sensible World shall be destroyed, all shall then be here as it is now there, an Empyreal Heaven, a *quasi* vacuity; when to ask where Heaven is, is to demand where the Presence of God is, or where we have the glory of that happy Vision. *Moses* that was bred up in all the Learning of the *Ægyptians*, committed a gross absurdity in Philosophy, when with these Eyes of Flesh he desired to see God, and petitioned his Maker, that is truth it self, to a contradiction. Those that imagine Heaven and Hell Neighbours, and conceive a vicinity between those two extreams, upon consequence of the Parable, where *Dives* discoursed with *Lazarus* in *Abraham*'s bosome, do too grosly conceive of those glorified Creatures, whose Eyes

shall

ſhall eaſily out-ſee the Sun, and behold without perſpective the extreameſt diſtances: For if there ſhall be in our glorified Eyes, the faculty of ſight and reception of Objects, I could think the viſible ſpecies there to be in as unlimitable a way, as now the intellectual. I grant that two Bodies placed beyond the tenth Sphere, or in a vacuity, according to *Ariſtotle*'s Philoſophy, could not behold each other, becauſe there wants a Body or Medium to hand and tranſport the viſible Rayes of the Object unto the ſenſe; but when there ſhall be a general defect of either Medium to convey, or light to prepare and diſpoſe that Medium, and yet a perfect Viſion, we muſt ſuſpend the Rules of our Philoſophy, and make all good by a more abſolute piece of Opticks.

I cannot tell how to ſay that fire is the eſſence of Hell; I know not what to make of Purgatory, * or conceive a flame that can either prey upon, or purifie the ſubſtance of a foul:] thoſe flames of ſulphur mention'd in the Scriptures, I take not to be underſtood of this preſent Hell, but of that to come, where fire ſhall make up the complement of our tortures, and have a body or ſubject wherein to manifeſt its tyranny: Some who have had the honour to be textuary in Divinity, are of opinion it ſhall be the ſame ſpecifical fire with ours. This is hard to conceive, yet can I make good how even that may prey upon our bodies, and yet not conſume us: For in this material world, there are bodies that perſiſt invincible in the powerfulleſt flames; and though by the action of fire they fall into ignition and liquation, yet will they never ſuffer a deſtruction: I would gladly know how *Moſes* with an actual fire calcin'd, or burnt the Golden Calf into powder: For that myſtical metal of Gold, whoſe ſolary and celeſtial nature I admire, expoſed unto the violence of fire, grows only hot and liquefies, but conſumeth not; ſo when the conſumable and volatile pieces of our bodies ſhall be refined into a more impregnable and fixed temper, like Gold; though they ſuffer from the action of flames, they ſhall never periſh, but lye immortal in the arms of fire. And ſurely, if this frame muſt ſuffer only by the action of this element, there will many bodies eſcape; and not only Heaven, but Earth will not be at an end, but rather a beginning. For at preſent it is not Earth, but a compoſition of Fire, Water, Earth, and Air; but at that time, ſpoiled of theſe ingredients, it ſhall appear in a ſubſtance more like it ſelf, its aſhes. Philoſophers that opinioned the worlds deſtruction by fire, did never dream of annihilation, which is beyond the power of ſublunary cauſes; for the laſt and proper action of that Element is but vitrification, or a reduction of a body into glaſs; and therefore ſome of our Chymicks facetiouſly affirm, that at the laſt fire all ſhall be cryſtallized and reverberated into glaſs, which is the utmoſt action of that Element. Nor need we fear this term [annihilation] or wonder that God will deſtroy the works of his Creation: For man ſubſiſting, who is, and will then truly appear a Microcoſm, the world cannot be ſaid to be deſtroyed. For the eyes of God, and perhaps alſo of our glorified ſelves, ſhall as really behold and contemplate the world in its Epitome or contracted eſſence, as now it doth at large and in its dilated ſubſtance. In the ſeed of a Plant to the eyes of God, and to the underſtanding of man, there exiſts, though in an inviſible way, the perfect leaves, flowers, and fruit thereof; (for things that are in *poſſe* to the ſenſe, are actually exiſtent to the underſtanding.) Thus God beholds all things, who contemplates as fully his works in their Epitome, as in their full volume; and beheld as amply the whole world in that little compendium of the ſixth day, as in the ſcattered and dilated pieces of thoſe five before. *Sect.* 50.

Men commonly ſet forth the torments of Hell by Fire, and the extremity of corporal Afflictions, and deſcribe Hell in the ſame method that *Mahomet* doth Heaven. This indeed makes a noiſe, and drums in popular Ears: but if this be the terrible piece thereof, it is not worthy to ſtand in diameter with Heaven, whoſe happineſs conſiſts in that part that is beſt able to comprehend it, that immortal eſſence, that tranſlated Divinity and Colony of God, the Soul. Surely though we place Hell under Earth, the Devil's walk and purlue is about it: Men ſpeak too popularly *Sect.* 51.

who place it in those flaming Mountains, which to grosser apprehensions represent Hell. The Heart of Man is the place the Devils dwell in; I feel sometimes a Hell within my self; *Lucifer* keeps his Court in my Breast; *Legion* is revived in me. * There are as many Hells, as *Anaxagoras* conceited Worlds:] there was more than one Hell in *Magdalene*, when there were seven Devils; for every Devil is an Hell unto himself; he holds enough of torture in his own *ubi*, and needs not the misery of circumference to afflict him: and thus a distracted Conscience here, is a shadow or introduction unto Hell hereafter. Who can but pity the merciful intention of those hands that do destroy themselves? the Devil were it in his power would do the like; which being impossible, his miseries are endless, and he suffers most in that Attribute wherein he is impassible, his immortality.

Sect. 52. I thank God, and with joy I mention it, I was never afraid of Hell, nor never grew pale at the description of that place; I have so fixed my contemplations on Heaven, that I have almost forgot the Idea of Hell, and am afraid rather to lose the Joyes of the one, than endure the misery of the other; to be deprived of them, is a perfect Hell, and needs methinks no addition to compleat our afflictions; that terrible term hath never detained me from sin, nor do I owe any good action to the name thereof: I fear God, yet am not afraid of him: his Mercies make me ashamed of my sins, before his Judgments afraid thereof: these are the forced and secondary method of his wisdom, which he useth but as the last remedy, and upon provocation: a course rather to deter the wicked, than incite the vertuous to his worship: I can hardly think there was ever any scared into Heaven: they go the fairest way to Heaven, that would serve God without a Hell: other Mercenaries, that crouch unto him in fear of Hell, though they term themselves the Servants, are indeed but the Slaves of the Almighty.

Sect. 53. And to be true, and speak my Soul, when I survey the occurrences of my Life, and call into account the Finger of God, I can perceive nothing but an Abyss and Mass of Mercies, either in general to mankind, or in particular to my self: and whether out of the prejudice of my affection, or an inverting and partial conceit of his mercies, I know not: but those which others term Crosses, Afflictions, Judgments, Misfortunes, to me, who inquire farther into them than their visible effects, they both appear, and in event have ever proved the secret and dissembled favours of his affection. It is a singular piece of Wisdom to apprehend truly, and without passion, the Works of God, and so well to distinguish his Justice from his Mercy, as not mis-call those noble Attributes: yet it is likewise an honest piece of Logick, so to dispute and argue the proceedings of God, as to distinguish even his judgments into mercies. For God is merciful unto all, because better to the worst, than the best deserve: and to say he punisheth none in this world, though it be a Paradox, is no absurdity. To one that hath committed Murther, if the Judg should only ordain a Fine, it were a madness to call this a punishment, and to repine at the sentence, rather than admire the Clemency of the Judg: Thus our offences being mortal, and deserving not only Death, but Damnation; if the goodness of God be content to traverse and pass them over with a loss, misfortune, or disease; what Frensie were it to term this a punishment, rather than an extremity of mercy; and to groan under the Rod of his Judgments, rather than admire the Scepter of his Mercies? Therefore to adore, honour, and admire him, is a Debt of Gratitude due from the Obligation of our Nature, States, and Conditions: and with these thoughts, he that knows them best, will not deny that I adore him. That I obtain Heaven, and the bliss thereof, is accidental, and not the intended work of my devotion: it being a felicity I can neither think to deserve, nor scarce in modesty to expect. For these two ends of us all, either as rewards or punishments, are mercifully ordained and disproportionably disposed unto our Actions: the one being so far beyond our deserts, the other so infinitely below our demerits.

There

There is no Salvation to those that believe not in Christ, that is, say some, since his Nativity, and as Divinity affirmeth, before also; which makes me much apprehend the end of those honest Worthies and Philosophers which died before his Incarnation. * It is hard to place those Souls in Hell] whose worthy Lives do teach us vertue on Earth: methinks amongst those many Subdivisions of Hell, there might have been one *Limbo* left for these. What a strange Vision will it be to see their Poetical fictions converted into Verities, and their imagined and fancied Furies, into real Devils? how strange to them will sound the History of *Adam*, when they shall suffer for him they never heard of? when they derive their Genealogy from the Gods, shall know they are the unhappy issue of sinful man? It is an insolent part of reason, to controvert the Works of God, or question the Justice of his proceedings. Could Humility teach others, as it hath instructed me, to contemplate the infinite and incomprehensible distance betwixt the Creator and the Creature; or did we seriously perpend that one Simile of St. *Paul*, *Shall the Vessel say to the Potter, why hast thou made me thus?* it would prevent these arrogant disputes of reason, nor would we argue the definitive sentence of God, either to Heaven or Hell. Men that live according to the right rule and law of reason, live but in their own kind, as beasts do in theirs; who justly obey the prescript of their natures, and therefore cannot reasonably demand a reward of their actions, as only obeying the natural dictates of their reason. It will therefore, and must at last appear, that all salvation is through Christ; which verity, I fear, these great examples of vertue must confirm, and make it good, how the perfectest actions of earth have no title or claim unto Heaven. *Sect.* 54.

Nor truly do I think the lives of these, or of any other were ever correspondent, or in all points conformable unto their Doctrines; it is evident that * *Aristotle* transgressed the rule of his own Ethicks;] the Stoicks that condemn passion, and command a man to laugh in *Phalaris* his Bull, could not endure without a groan a fit of the Stone or Colick. * The *Scepticks* that affirmed they knew nothing,] even in that opinion confute themselves, and thought they knew more than all the world beside. *Diogenes* I hold to be the most vain-glorious man of his time, and more ambitious in refusing all Honours, than *Alexander* in rejecting none. Vice and the Devil put a Fallacy upon our Reasons, and provoking us too hastily to run from it, entangle and profound us deeper in it. * The Duke of *Venice*, that weds himself unto the Sea by a Ring of Gold,] I will not accuse of prodigality, because it is a solemnity of good use and consequence in the State: * But the Philosopher that threw his money into the Sea to avoid Avarice, was a notorious prodigal.] There is no road or ready way to vertue; it is not an easie point of Art to disintangle our selves from this riddle, or web of Sin: To perfect vertue, as to Religion, there is required a *Panoplia*, or compleat armour; that whil'st we lye at close ward against one Vice, we lye not open to the venny of another: And indeed wiser discretions that have the thread of reason to conduct them, offend without a pardon; whereas underheads may stumble without dishonour. * There go so many circumstances to piece up one good action, that it is a lesson to be good, and we are forced to be vertuous by the Book.] Again, the Practice of men holds not an equal pace; yea, and often runs counter to their Theory; we naturally know what is good, but naturally pursue what is evil: the Rhetorick wherewith I perswade another, cannot perswade my self: There is a depraved appetite in us, that will with patience hear the learned instructions of reason, but yet perform no farther than agrees to its own irregular humour. In brief, we all are Monsters, that is, a composition of Man and Beast, wherein we must endeavour to be as the Poets fancy that wise man *Chiron*, that is, to have the Region of Man above that of Beast, and Sense to sit but at the feet of Reason. Lastly, I do desire with God, that all, but yet affirm with men, that few shall know salvation; that the bridge is narrow, the passage strait unto life: yet those who do confine the Church of God, either *Sect.* 55.

to particular Nations, Churches or Families, have made it far narrower than our Saviour ever meant it.

Sect. 56. * The vulgarity of those Judgments that wrap the Church of God in *Strabo*'s cloak, and restrain it unto *Europe*,] seem to me as bad Geographers as *Alexander*, who thought he had Conquer'd all the world, when he had not subdued the half of any part thereof: For we cannot deny the Church of God both in *Asia* and *Africa*, if we do not forget the Peregrinations of the Apostles, the deaths of the Martyrs, the Sessions of many, and, even in our reformed judgment, lawful Councils, held in those parts in the minority and nonage of ours: nor must a few differences, more remarkable in the eyes of man, than perhaps in the judgment of God, excommunicate from Heaven one another, much less those Christians who are in a manner all Martyrs, maintaining their Faith in the noble way of persecution, and serving God in the Fire, whereas we honour him but in the Sun-shine.

'Tis true, we all hold there is a number of Elect, and many to be saved, yet take our Opinions together, and from the confusion thereof, there will be no such thing as salvation, nor shall any one be saved; for first the Church of *Rome* condemneth us, we likewise them; the Sub-reformists and Sectaries sentence the Doctrine of our Church as damnable; the Atomist, or Familist, reprobates all these; and all these, them again. Thus whilst the mercies of God do promise us Heaven, our conceits and opinions exclude us from that place. There must be therefore more than one Saint *Peter*; particular Churches and Sects usurp the Gates of Heaven, and turn the key against each other; and thus we go to Heaven against each others wills, conceits, and opinions, and with as much uncharity, as ignorance, do err, I fear, in points not only of our own, but one anothers salvation.

Sect. 57. I believe many are saved, who to man seem reprobated; and many are reprobated, who in the opinion and sentence of man stand elected: there will appear at the last day, strange and unexpected examples, both of his Justice and his Mercy; and therefore to define either, is folly in man, and insolency even in the Devils: those acute and subtile Spirits in all their sagacity, can hardly divine who shall be saved; which if they could Prognostick, their labour were at an end; nor need they compass the Earth seeking whom they may devour. * Those who upon a rigid Application of the Law, sentence *Solomon* unto damnation] condemn not only him, but themselves, and the whole world; for by the Letter, and written Word of God, we are without exception in the state of Death, but there is a Prerogative of God, and an arbitrary pleasure above the Letter of his own Law, by which alone we can pretend unto Salvation, and through which *Solomon* might be as easily saved as those who condemn him.

Sect. 58. The number of those who pretend unto Salvation, and those infinite swarms who think to pass through the Eye of this Needle, have much amazed me. That name and compellation of *little Flock*, doth not comfort, but deject my Devotion; especially when I reflect upon mine own unworthiness, wherein, according to my humble apprehensions, I am below them all. I believe there shall never be an Anarchy in Heaven; but as there are Hierarchies amongst the Angels, so shall there be degrees of priority amongst the Saints. Yet is it (I protest,) beyond my ambition to aspire unto the first ranks; my desires only are, and I shall be happy therein, to be but the last man, and bring up the Reer in Heaven.

Sect. 59. Again, I am confident, and fully perswaded, yet dare not take my Oath of my Salvation: I am as it were sure, and do believe without all doubt, that there is such a City as *Constantinople*; yet for me to take my Oath thereon, were a kind of Perjury, because I hold no infallible warrant from my own sense to confirm me in the certainty thereof. And truly, though many pretend to an absolute certainty of their Salvation, yet when an humble Soul shall contemplate her own unworthiness, she shall meet with many doubts, and suddenly find how little we stand in need of the precept of St. *Paul*, *Work out your Salvation with fear and trembling*. That which is the cause of my Election,

Election, I hold to be the cauſe of my Salvation, which was the mercy and beneplacitof God, before I was, or the Foundation of the World. *Before Abraham was I am*, is the ſaying of Chriſt; yet is it true in ſome ſenſe, if I ſay it of my ſelf, for I was not only before my ſelf, but *Adam*, that is in the Idea of God, and the decree of that Synod held from all Eternity. And in this ſenſe, I ſay, the World was before the Creation, and at an end before it had a beginning; and thus was I dead before I was alive; though my Grave be *England*, my dying place was Paradiſe; and *Eve* miſcarried of me, before ſhe conceived of *Cain*.

Inſolent zeals that do decry good Works, and relye only upon Faith, take not away merit: for depending upon the efficacy of their Faith, they enforce the condition of God, and in a more ſophiſtical way do ſeem to challenge Heaven. It was decreed by God, that only thoſe that lapt in the Water like Dogs, ſhould have the honour to deſtroy the *Midianites*; yet could none of thoſe juſtly challenge, or imagin he deſerved that honour thereupon. I do not deny, but that true Faith, and ſuch as God requires, is not only a Mark or Token, but alſo a means of our Salvation; but where to find this, is as obſcure to me, as my laſt end. And if our Saviour could object unto his own Diſciples and Favourites, a Faith, that, to the quantity of a Grain of Muſtard-ſeed, is able to remove Mountains; ſurely that which we boaſt of, is not any thing, or at the moſt, but a remove from nothing. This is the Tenor of my Belief; wherein, though there be many things ſingular; and to the humour of my irregular ſelf; yet if they ſquare not with maturer judgments, I diſclaim them, and do no further favour them, than the learned and beſt judgments ſhall authorize them. *Sect.* 60.

THE

THE SECOND PART.

NOW for that other Vertue of Charity, without which Faith is a meer notion, and of no exiſtence, I have ever endeavoured to nouriſh the merciful diſpoſition and humane inclination I borrowed from my Parents, and regulate it to the written and preſcribed Laws of Charity; and if I hold the true Anatomy of my ſelf, I am delineated and naturally framed to ſuch a piece of Vertue: for I am of a Conſtitution ſo general, that it conſorts and ſympathizeth with all things, I have no antipathy, or rather Idio-ſyncraſie, in dyet, humour, air, any thing: * I wonder not at the *French* for their Diſhes of Frogs, Snails and Toadſtoals,] nor at the *Jews* for *Locuſts* and *Graſhoppers*; but being amongſt them, make them my common Viands; and I find they agree with my Stomach as well as theirs. I could digeſt a Sallad gathered in a Church-yard, as well as in a Garden. I cannot ſtart at the preſence of a Serpent, Scorpion, Lizard, or Salamander; at the ſight of a Toad or Viper, I find in me no deſire to take up a ſtone to deſtroy them. I feel not in my ſelf thoſe common Antipathies that I can diſcover in others: Thoſe National repugnances do not touch me, nor do I behold with prejudice the *French*, *Italian*, *Spaniard* or *Dutch*; but where I find their actions in ballance with my Countrey-mens, I honour, love, and embrace them in ſome degree: I was born in the eighth Climate, but ſeem for to be framed and conſtellated unto all: I am no Plant that will not proſper out of a Garden. All places, all Airs make unto me one Countrey; I am in *England* every where, and under any Meridian: I have been ſhipwrackt, yet am not Enemy with the Sea or Winds; I can ſtudy, play or ſleep in a Tempeſt. In brief, I am averſe from nothing; my Conſcience would give me the lye if I ſhould ſay I abſolutely deteſt or hate any eſſence, but the Devil; or ſo at leaſt abhor any thing, but that we might come to compoſition. If there be any among thoſe common objects of hatred I do contemn and laugh at, it is that great Enemy of Reaſon, Vertue and Religion, the Multitude; that numerous piece of Monſtroſity, which taken aſunder, ſeem men, and the reaſonable Creatures of God; but confuſed together, make but one great Beaſt, and a monſtroſity more prodigious than *Hydra*: it is no breach of Charity to call theſe Fools; it is the ſtyle all holy Writers have afforded them, ſet down by *Solomon* in Canonical Scripture, and a point of our Faith to believe ſo. Neither in the name of Multitude, do I only include the baſe and minor ſort of People; there is a rabble even amongſt the Gentry, a ſort of Plebeian heads, whoſe fancy moves with the ſame Wheel as theſe; Men in the ſame Level with Mechanicks, though their fortunes do ſomewhat gild their infirmities, *Sect. 1.*

infirmities; and their Purſes compound for their follies. But as in caſting account, three or four men together come ſhort in account of one man placed by himſelf below them; ſo neither are a Troop of theſe ignorant *Doradoes* of that true eſteem and value, as many a forlorn perſon, whoſe condition doth place him below their Feet. Let us ſpeak like Politicians, there is a Nobility without Heraldry, a natural dignity, whereby one man is ranked with another, another filed before him, according to the quality of his Deſert, and preheminence of his good parts. Though the corruption of theſe times, and the byas of preſent practice wheel another way; thus it was in the firſt and primitive Commonwealths, and is yet in the integrity and Cradle of well order'd Polities, till corruption gretteth ground; ruder deſires labouring after that which wiſer conſiderations contemn, every one having a liberty to amaſs and heap up riches, and they a licence or faculty to do or purchaſe any thing.

Sect. 2. This general and indifferent temper of mine, doth more nearly diſpoſe me to this noble vertue. It is a happineſs to be born and framed unto Vertue, and to grow up from the Seeds of Nature, rather than the inoculations and forced graffs of Education: yet if we are directed only by our particular Natures, and regulate our inclinations by no higher rule than that of our reaſons, we are but Moraliſts; Divinity will ſtill call us Heathens. Therefore this great work of Charity muſt have other motives, ends, and impulſions: I give no Alms to ſatisfie the hunger of my Brother, but to fulfill and accompliſh the Will and Command of my God; I draw not my Purſe for his ſake that demands it, but his that enjoyned it; I relieve no man upon the Rhetorick of his miſeries, nor to content mine own commiſerating diſpoſition; for this is ſtill but moral Charity, and an Act that oweth more to paſſion than reaſon. He that relieves another upon the bare ſuggeſtion and bowels of pity, doth not this ſo much for his ſake, as for his own: for by compaſſion we make anothers miſery our own; and ſo by relieving them, we relieve our ſelves alſo. It is as erroneous a conceit to redreſs other Mens miſfortunes upon the common conſiderations of merciful natures, that it may be one day our own caſe; for this is a ſiniſter and politick kind of Charity, whereby we ſeem to beſpeak the pities of men in the like occaſions; and truly I have obſerved that thoſe profeſſed Eleemoſynaries, though in a croud or multitude, do yet direct and place their petitions on a few and ſelected perſons; there is ſurely a Phyſiognomy, which thoſe experienced and Maſter Mendicants obſerve, whereby they inſtantly diſcover a merciful aſpect, and will ſingle out a face, wherein they ſpy the ſignatures and marks of mercy. For there are myſtically in our faces certain Characters which carry in them the motto of our Souls, wherein he that can read *A. B. C.* may read our natures. I hold moreover that there is a Phytognomy, or Phyſiognomy, not only of Men, but of Plants and Vegetables; and in every one of them, ſome outward figures which hang as ſigns or buſhes of their inward forms. The Finger of God hath left an Inſcription upon all his works, not graphical, or compoſed of Letters, but of their ſeveral forms, conſtitutions, parts, and operations, which aptly joyned together do make one word that doth expreſs their natures. By theſe Letters God calls the Stars by their names; and by this Alphabet *Adam* aſſigned to every Creature a name peculiar to its nature. Now there are beſides theſe Characters in our Faces, certain myſtical figures in our Hands, which I dare not call meer daſhes, ſtrokes, *a la volee*, or at random, becauſe delineated by a Pencil that never works in vain; and hereof I take more particular notice, becauſe I carry that in mine own Hand, which I could never read of, nor diſcover in another. *Ariſtotle* I confeſs, in his acute, and ſingular Book of Phyſiognomy, hath made no mention of Chiromancy; yet I believe the *Egyptians*, who were nearer addicted to thoſe abſtruſe and myſtical Sciences had a knowledge therein; to which thoſe vagabond and counterfeit *Egyptians* did after pretend, and perhaps retained a few corrupted principles, which ſometimes might verifie their prognoſticks.

It is the common wonder of all men, * how among ſo many millions of faces,

faces, there ſhould be none alike:] Now contrary, I wonder as much how there ſhould be any: he that ſhall conſider how many thouſand ſeveral words have been careleſly and without ſtudy compoſed out of 24 Letters; withall, how many hundred lines there are to be drawn in the Fabrick of one Man, ſhall eaſily find that this variety is neceſſary: And it will be very hard that they ſhall ſo concur, as to make one Portraict like another. Let a Painter careleſly limb out a million of Faces, and you ſhall find them all different; yea let him have his Copy before him, yet after all his Art there will remain a ſenſible diſtinction; for the Pattern or Example of every thing is the perfecteſt in that kind, whereof we ſtill come ſhort, though we tranſcend or go beyond it, becauſe herein it is wide, and agrees not in all points unto its Copy. Nor doth the Similitude of Creatures diſparage the variety of Nature, nor any way confound the Works of God. For even in things alike there is diverſity; and thoſe that do ſeem to accord, do manifeſtly diſagree. And thus is man like God; for in the ſame things that we reſemble him, we are utterly different from him. There was never any thing ſo like another, as in all points to concur; there will ever ſome reſerved difference ſlip in, to prevent the identity, without which two ſeveral things would not be alike, but the ſame, which is impoſſible.

But to return from Philoſophy to Charity; I hold not ſo narrow a conceit of this vertue, as to conceive that to give Alms, is only to be Charitable, or think a piece of Liberality can comprehend the Total of Charity; Divinity hath wiſely divided the act thereof into many branches, and hath taught us in this narrow way, many paths unto goodneſs: as many ways as we may do good, ſo many ways we may be charitable: there are Infirmities not only of Body, but of Soul and Fortunes, which do require the merciful hand of our abilities. I cannot contemn a man for ignorance, but behold him with as much pity as I do *Lazarus*. It is no greater Charity to cloath his Body, than apparel the nakedneſs of his Soul. It is an honourable object to ſee the Reaſons of other men wear our Liveries, and their borrowed Underſtandings do homage to the bounty of ours: It is the cheapeſt way of beneficence, and like the natural charity of the Sun, illuminates another without obſcuring it ſelf. To be reſerved and caitiff in this part of goodneſs, is the ſordideſt piece of covetouſneſs, and more contemptible than the pecuniary Avarice. To this (as calling my ſelf a Scholar) I am obliged by the duty of my condition; I make not therefore my head a grave, but a treaſure of Knowledge; I intend no Monopoly, but a Community in Learning; I ſtudy not for my own ſake only, but for theirs that ſtudy not for themſelves. I envy no man that knows more than my ſelf, but pity them that know leſs. I inſtruct no man as an exerciſe of my knowledge, or with an intent rather to nouriſh and keep it alive in mine own head, than beget and propagate it in his; and in the midſt of all my endeavours, there is but one thought that dejects me, that my acquired parts muſt periſh with my ſelf, nor can be Legacyed among my honoured Friends. I cannot fall out, or contemn a man for an errour, or conceive why a difference in Opinion ſhould divide an Affection: for Controverſies, Diſputes, and Argumentations, both in Philoſophy, and in Divinity, if they meet with diſcreet and peaceable Natures, do not infringe the Laws of Charity: in all Diſputes, ſo much as there is of Paſſion, ſo much there is of nothing to the purpoſe; for then Reaſon like a bad Hound, ſpends upon a falſe Scent, and forſakes the Queſtion firſt ſtarted. And this is one Reaſon why Controverſies are never determined; for though they be amply propoſed, they are ſcarce at all handled, they do ſo ſwell with unneceſſary Digreſſions; and the *Parentheſis* on the Party, is often as large as the main Diſcourſe upon the Subject. The Foundations of Religion are already eſtabliſhed, and the Principles of Salvation ſubſcribed unto by all; there remain not many Controverſies worthy a Paſſion, and yet never any diſputed without, not only in Divinity, but inferiour Arts: * What a *βατραχομυομαχία* and hot skirmiſh

Sect. 3.

is betwixt *S.* and *T.* in *Lucian?*] How do Grammarians hack and flash for the Genitive Case in † *Jupiter?* How they do break their own Pates, to salve that of *Priscian? Si foret in terris, rideret Democritus.* Yea, even amongst wiser militants, how many wounds have been given, and credits slain, for the poor victory of an opinion, or beggerly conquest of a distinction? Scholars are men of Peace, they bear no Arms, * but their Tongues are sharper than *Actius* his Razor;] their Pens carry farther, and give a lowder report than Thunder: I had rather stand in the shock of a *Basiliſco*, than in the fury of a mercilesse Pen. * It is not meer Zeal to Learning, or Devotion to the Muses, that wiser Princes patron the Arts, and carry an indulgent Aspect unto Scholars; but a desire to have their Names eternized by the memory of their writings,] and a fear of the revengeful Pen of succeeding Ages: for these are the men, that when they have played their parts, and had their *exits*, must step out and give the moral of their Scenes, and deliver unto Posterity an Inventory of their Vertues and Vices. And surely there goes a great deal of Conscience to the compiling of an History: there is no reproach to the Scandal of a Story; it is such an authentick kind of falshood, that with authority belies our good Names to all Nations and Posterity.

† Whether *Jovis* or *Jupitris.*

Sect. 4. There is another offence unto Charity, which no Author hath ever written of, and few take notice of, and that's the reproach, not of whole professions, mysteries and conditions, but of whole Nations, wherein by opprobrious Epithets we miscall each other, and by an uncharitable Logick, from a disposition in a few, conclude a habit in all.

Le mutin Anglois, & le bravache Escossois;
Le bougre Italian, & le fol Francois;
Le poultron Romain, le larron de Gascongne,
L'Espagnol superbe, & l'Aleman yurongne.

* St. *Paul*, that calls the *Cretians* Lyars, doth it but indirectly, and upon quotation of their own Poets.] * It is as bloody a thought in one way, as *Nero's* was in another. For by a word we wound a thousand,] and at one blow assassine the honour of a Nation. It is as compleat a piece of madness to miscall and rave against the times; or think to recall men to reason, by a fit of passion: *Democritus*, that thought to laugh the times into goodness, seems to me as deeply Hypochondriack, as *Heraclitus* that bewailed them; it moves not my Spleen to behold the multitude in their proper humours, that is, in their fits of folly and madness, as well understanding that Wisdom is not profan'd unto the World, and 'tis the priviledge of a few to be Vertuous. They that endeavour to abolish Vice, destroy also Vertue; for contraries, though they destroy one another, are yet in life of one another. Thus Vertue (abolish Vice) is an Idea: again, the community of sin doth not disparage goodness; for when Vice gains upon the major part, Vertue in whom it remains, becomes more excellent; and being lost in some, multiplies its goodness in others, which remain untouched, and persist intire in the general inundation. I can therefore behold Vice without a Satyr, content only with an admonition, or instructive reprehension; for Noble Natures, and such as are capable of goodness, are railed into Vice, that might as easily be admonished into Vertue; and we should be all so far the Orators of goodness, as to protect her from the power of Vice, and maintain the cause of injured Truth. No man can justly censure or condemn another; because indeed no man truly knows another. This I perceive in my self; for I am in the dark to all the World, and my nearest Friends behold me but in a Cloud: those that know me but superficially, think less of me than I do of my self; those of my near acquaintance think more: God who truly knows me, knows that I am nothing; for he only beholds me, and all the World, who looks not on us through a derived Ray, or a Trajection of a sensible Species, but beholds the substance without the help of accidents, and the forms of things, as we their Operations. Further, no man can judge another, because no man knows himself; for we censure others but as they disagree from that humour which we fancy laudable in our selves, and commend

mend others but for that wherein they seem to quadrate and consent with us. So that in conclusion, all is but that we all condemn, Self-love. 'Tis the general complaint of these times, and perhaps of those past, that Charity grows cold; which I perceive most verified in those which most do manifest the Fires and Flames of Zeal; for it is a Vertue that best agrees with coldest Natures, and such as are complexioned for humility: But how shall we expect Charity towards others, when we are uncharitable to our selves? Charity begins at home, is the voice of the World: yet is every man his greatest Enemy, and as it were, his own Executioner. *Non occides*, is the Commandment of God, yet scarce observed by any man, for I perceive every man is his own *Atropos*, and lends a hand to cut the Thred of his own days. *Cain* was not therefore the first Murtherer, but *Adam*, who brought in death; whereof he beheld the practice and example in his own Son *Abel*, and saw that verified in the experience of another, which faith could not perswade him in the Theory of himself.

There is, I think, no man that apprehendeth his own miseries less than my self, and no man that so nearly apprehends anothers. I could lose an Arm without a Tear, and with few Groans, methinks, be quartered into pieces; yet can I weep most seriously at a Play, and receive with a true passion, the counterfeit Griefs of those known and professed Impostures. It is a barbarous part of inhumanity to add unto any afflicted parties misery, or endeavour to multiply in any man a passion, whose single nature is already above his patience: this was the greatest affliction of *Job*; and those oblique expostulations of his Friends, a deeper injury than the down-right blows of the Devil. It is not the Tears of our own Eyes only, but of our Friends also, that do exhaust the current of our sorrows; which falling into many streams, runs more peaceably, and is contented with a narrower Channel. It is an Act within the power of Charity, to translate a passion out of one Breast into another, and to divide a sorrow almost out of it self for an affliction, like a dimension, may be so divided, as if not indivisible, at least to become insensible. Now with my friend I desire not to share or participate, but to engross his sorrows, that by making them mine own, I may more easily discuss them; for in mine own reason, and within my self, I can command that, which I cannot intreat without my self, and within the circle of another. I have often thought those noble parts and examples of friendship, not so truly Histories of what had been, as Fictions of what should be; but I now perceive nothing in them but possibilities nor any thing in the Heroick examples of *Damon* and *Pythias*, *Achilles* and *Patroclus*, which methinks upon some grounds I could not perform within the narrow compass of my self. That a man should lay down his life for his friend, seems strange to vulgar affections, and such as confine themselves within that worldly principle, Charity begins at home. For mine own part, I could never remember the relations that I held unto my self nor the respect that I owe unto my own nature, in the cause of God, my Country, and my Friends. Next to these three, I do embrace my self. I confess I do not observe that order that the Schools ordain our affections, to love our Parents, Wives, Children, and then our Friends; for excepting the injunctions of Religion, I do not find in my self such a necessary and indissoluble Sympathy to all those of my Blood. I hope I do not break the fifth Commandment, if I conceive I may love my Friend before the neerest of my Blood, even those to whom I owe the Principles of life; I never yet cast a true affection on a Woman, but I have loved my friend as I do Vertue, my Soul, my God. From hence methinks I do conceive how God loves man, what happiness there is in the love of God. Omitting all other, there are three most mystical Unions; two Natures in one Person; three Persons in one Nature; one Soul in two bodies. For though indeed they be really divided, yet are they so united, as they seem but one, and make rather a duality, than two distinct Souls. *Sect.* 5.

There are wonders in true affection; it is a Body of *Ænigma*'s, Mysteries and Riddles; wherein two so become one as they both become two: I love my friend before my self, and yet methinks I do not love him enough: some few Months hence, my multiplied affection will make me believe I have not *Sect.* 6.

loved him at all: when I am from him, I am dead till I be with him; when I am with him, I am not satisfied, but would still be nearer him. United Souls are not satisfied with imbraces, but desire to be truly each other; which being impossible, their desires are infinite, and must proceed without a possibility of satisfaction. Another misery there is in affection, that whom we truely love like our own selves, we forget their looks, nor can our memory retain the Idea of their Faces; and it is no wonder: for they are our selves, and our affection makes their looks our own. This noble affection falls not on vulgar and common constitutions, but on such as are mark'd for vertue: he that can love his Friend with this noble ardour, will in a competent degree affect all. Now if we can bring our affections to look beyond the Body, and cast an Eye upon the Soul, we have found out the true object, not only of friendship, but Charity; and the greatest happiness that we can bequeath the Soul, is that wherein we all do place our last felicity, Salvation; which though it be not in our power to bestow, it is in our Charity, and pious invocations to desire, if not procure and further. I cannot contentedly frame a Prayer for my self in particular, without a Catalogue for my Friends; nor requeſt a happiness wherein my sociable disposition doth not desire the fellowship of my Neighbour. I never hear the Toll of a passing Bell, though in my mirth, without my Prayers and best wishes for the departing Spirit: I cannot go to cure the Body of my Patient, but I forget my profession, and call unto God for his Soul: I cannot see one say his Prayers, but instead of imitating him, I fall into supplication for him, who perhaps is no more to me than a common nature: and if God hath vouchsafed an Ear to my supplications, there are surely many happy that never saw me, and enjoy the blessing of mine unknown devotions. To pray for Enemies, that is for their Salvation, is no harsh precept, but the practice of our daily and ordinary devotions. * I cannot believe the story of the *Italian*;] our bad wishes and uncharitable desires proceed no further than this Life; it is the Devil, and the uncharitable votes of Hell, that desire our misery in the world to come.

Sect. 7. To do no injury, nor take none; was a principle, which to my former years, and impatient affections, seemed to contain enough of Morality; but my more setled years, and Christian constitution, have fallen upon severer resolutions. I can hold there is no such thing as injury; that if there be, there is no such injury as revenge, and no such revenge, as the contempt of an injury; that to hate another, is to malign himself; that the truest way to love another is to despise our selves. I were unjust unto mine own Conscience, if I should say I am at variance with any thing like my self. I find there are many pieces in this one Fabrick of man; this frame is raised upon a Mass of Antipathies: I am one methinks, but as the World; wherein notwithstanding there are a swarm of distinct Essences, and in them another world of contrarieties; we carry private and domestick Enemies within, publick and more hostile Adversaries without. The Devil, that did but buffet St. *Paul*, plays methinks at sharp with me: Let me be nothing, if within the compass of my self, I do not find the Battel of *Lepanto*, Passion against Reason, Reason against Faith, Faith against the Devil, and my Conscience against all. There is another man within me, that's angry with me, rebukes, commands, and dastards me. I have no Conscience of marble, to resist the hammer of more heavy offences; nor yet too soft and waxen, as to take the impression of each single *Peccadillo* or scape of infirmity: I am of a strange belief, that it is as easie to be forgiven some sins, as to commit some others. For my Original sin, I hold it to be washed away in my Baptism; for my actual transgressions, I compute and reckon with God but from my last repentance, Sacrament, or general absolution; and therefore am not terrified with the sins or madness of my Youth. I thank the goodness of God, * I have no sins that want a name;] I am not singular in offences, my transgressions are Epidemical, and from the common breath of our corruption. For there are certain tempers of Body, which match with an humorous depravity of mind, do hatch and produce vitiosities, whose newness and monstrosity

monſtroſity of Nature admits no name; * this was the temper of that *Lecher* that carnal'd with a *Statua.*] * and the conſtitution of *Nero* in his Spintrian recreations.] For the Heavens are not only fruitful in new and unheard-of Stars, the Earth in Plants and Animals, but mens minds alſo in villany and vices: now the dulneſs of my reaſon, and the vulgarity of my diſpoſition, never prompted my invention, nor ſollicited my affection unto any of theſe; yet even thoſe common and quotidian infirmities that ſo neceſſarily attend me, and do ſeem to be my very nature, have ſo dejected me, ſo broken the eſtimation that I ſhould have otherwiſe of my ſelf, that I repute my ſelf the moſt abject piece of mortality. Divines preſcribe a fit of ſorrow to repentance: there goes indignation, anger, ſorrow, hatred, into mine, paſſions of a contrary nature, which neither ſeem to ſuit with this action, nor my proper conſtitution. It is no breach of charity to our ſelves, to be at variance with our Vices: nor to abhor that part of us, which is an enemy to the ground of Charity, our God; wherein we do but imitate our great ſelves the World, whoſe divided Antipathies and contrary faces do yet carry a charitable regard unto the whole by their particular diſcords, preſerving the common harmony, and keeping in fetters thoſe powers, whoſe rebellions once Maſters, might be the ruine of all.

I thank God, amongſt thoſe millions of Vices I do inherit and hold from *Adam*, I have eſcaped one, and that a mortal enemy to Charity, the firſt and father ſin, not only of man, but of the devil, Pride; a vice whoſe name is comprehended in a Monoſyllable, but in its nature not circumſcribed with a world; I have eſcaped it in a condition that can hardly avoid it: thoſe petty acquiſitions and reputed perfections that advance and elevate the conceits of other men, add no feathers unto mine. * I have ſeen a Grammarian Towr and Plume himſelf over a ſingle line in *Horace*, and ſhow more pride] in the conſtruction of one Ode, than the Author in the compoſure of the whole Book. For my own part, beſides the *Jargon* and *Patois* of ſeveral Provinces, I underſtand no leſs than ſix Languages; yet I proteſt I have no higher conceit of my ſelf, than had our Fathers before the confuſion of *Babel*, when there was but one Language in the World, and none to boaſt himſelf either Linguiſt or Critick. I have not only ſeen ſeveral Countries, beheld the nature of their Climes, the Chorography of their Provinces, Topography of their Cities, but underſtood their ſeveral Laws, Cuſtoms and Policies; yet cannot all this perſwade the dulneſs of my ſpirit unto ſuch an opinion of my ſelf, as I behold in nimbler and conceited heads that never looked a degree beyond their neſts. I know the names and ſomewhat more of all the Conſtellations in my Horizon; yet I have ſeen a prating Mariner, that could only name the Pointers and the North-Star out-talk me, and conceit himſelf a whole Sphere above me. I know moſt of the Plants of my Country, and of thoſe about me, yet methinks I do not know ſo many as when I did but know a hundred, and had ſcarcely ever Simpled further than *Cheapſide*: for indeed, heads of capacity and ſuch as are not full with a handful, or eaſie meaſure of knowledge, think they know nothing till they know all; which being impoſſible, they fall upon the opinion of *Socrates*, and only know they know not any thing. * I cannot think that *Homer* pin'd away upon the Riddle of the Fiſhermen,] or * that *Ariſtotle*, who underſtood the uncertainty of knowledge, and confeſſed ſo often the Reaſon of Man too weak for the works of Nature, did ever drown himſelf upon the flux and reflux of *Euripus.*] We do but learn to day, what our better advanced judgements will unteach to morrow; and * *Ariſtotle* doth but inſtruct us, as *Plato* did him; that is, to confute himſelf.] I have run through all ſorts, yet find no reſt in any: though our firſt ſtudies and *junior* endeavours may ſtyle us Peripateticks, Stoicks, or Academicks; yet I perceive the wiſeſt heads prove, at laſt, almoſt all Scepticks, and ſtand like *Janus* in the Field of knowledge. I have therefore one common and authentick Philoſophy I learned in the Schools, whereby I diſcourſe and ſatisfie the reaſon of other men; another more reſerved, and drawn from experience, whereby I content mine own. *Solomon*, that complained of *Sect.* 8.

ignorance

ignorance in the height of knowledge hath not only humbled my conceits, but discouraged my endeavours. There is yet another conceit that hath sometimes made me shut my books, which tells me it is a vanity to waste our days in the blind pursuit of knowledge; it is but attending a little longer, and we shall enjoy that by instinct and infusion, which we endeavour all here by labour and inquisition: it is better to sit down in a modest ignorance, and rest contented with the natural blessing of our own reasons, than buy the uncertain knowledge, of this life, with sweat and vexation which Death gives every fool *gratis*, and is an accessary of our glorification.

Sect. 9. I was never yet once, and commend their resolutions, who never marry twice; not that I disallow of second marriage: as neither in all cases of Polygamy, which considering sometimes, and the unequal number of both Sexes, may be also necessary. The whole world was made for man, but the twelfth part of man for woman: Man is the whole world, and the Breath of God; Woman the Rib, and crooked piece of man. * I could be content that we might procreate like Trees without conjunction, or that there were any way to perpetuate the world without this trivial and vulgar way of coition; it is the foolishest act a wise man commits in all his life,] nor is there any thing that will more deject his cool'd imagination, when he shall consider what an odd and unworthy piece of folly he hath committed. I speak not in prejudice, nor am averse from that sweet Sex, but naturally amorous of all that is beautiful; I can look a whole day with delight upon a handsome Picture, though it be but of an Horse. It is my temper, and I like it the better, to affect all harmony; and sure there is musick even in the beauty, and the silent note which *Cupid* strikes, far sweeter than the sound of an Instrument: For there is a Musick where ever there is a Harmony, order or proportion; and thus far we may maintain the Musick of the Spheres: for those well ordered motions, and regular paces, though they give no sound unto the Ear, yet to the understanding they strike a note most full of harmony. Whatsoever is harmonically composed, delights in harmony; which makes me much distrust the symmetry of those heads which declaim against all Church-Musick. For my self, not only from my obedience, but my particular genius, I do embrace it: for even that vulgar and Tavern-Musick, which makes one man merry, another mad, strikes in me a deep fit of Devotion, and a profound contemplation of the first Composer; there is something in it of Divinity more than the Ear discovers: it is an Hieroglyphical and shadowed Lesson of the whole world, and Creatures of God, such a melody to the Ear, as the whole world well understood, would afford the understanding. In brief, it is a sensible fit of that harmony, which intellectually sounds in the Ears of God. I will not say with *Plato*, the Soul is an harmony, but harmonical, and hath its nearest sympathy unto Musick: thus some whose temper of body agrees, and humours the constitution of their Souls, are born Poets, though indeed all are naturally inclined unto Rhythm. ‖ This made *Tacitus* in the very first Line of this Story, fall upon a Verse; and *Cicero* the worst of Poets, but * declaiming for a Poet, falls in the very first sentence upon a perfect ‖ Hexameter. I feel not in me those sordid and unchristian desires of my profession; I do not secretly implore and wish for Plagues, rejoyce at Famines, revolve *Ephemerides* and Almanacks in expectation of malignant Aspects, fatal Conjunctions and Eclipses: I rejoyce not at unwholsom Springs, nor unseasonable Winters: my Prayer goes with the Husbandman's; I desire every thing in its proper season, that neither men nor the times be out of temper. Let me be sick my self, if sometimes the malady of my Patient be not a Disease unto me; I desire rather to cure his infirmities than my own necessities: where I do him no good, methinks it is scarce honest gain: though I confess tis but the worthy Salary of our well intended endeavours. I am not only ashamed, but heartily sorry that besides death, there are Diseases incurable: yet not for my own sake or that they be beyond my Art, but for the general cause and sake of humanity, whose common Cause I apprehend as mine own: and to speak more generally, those three Noble Professions which all Civil Common-wealths do honour, are

‖ *Vbem Romam in principio Reges habuere.*

* *Pro Archia Poeta.*

‖ *In qua menon inficior mediocriter esse.*

are raiſed upon the fall of *Adam*, and are not any way exempt from their infirmities: there are not only Diſeaſes incurable in Phyſick, but Caſes indiſſolvable in Laws, Vices incorrigible in Divinity: if General Councils may err, I do not ſee why particular Courts ſhould be infallible: their perfecteſt rules are raiſed upon the erroneous reaſons of Man: and the Laws of one do but condemn the rules of another: as *Ariſtotle* oft-times the opinions of his Predeceſſors, becauſe, though agreeable to reaſon, yet were not conſonant to his own Rules, and the Logick of his proper Principles. Again, to ſpeak nothing of the Sin againſt the Holy Ghoſt, whoſe cure not only, but whoſe nature is unknown: I can cure the Gout or Stone in ſome, ſooner than Divinity, Pride, or Avarice in others. I can cure vices by Phyſick when they remain incurable by Divinity; and they ſhall obey my Pills when they contemn their Precepts. I boaſt nothing, but plainly ſay, we all labour againſt our own cure: for death is the cure of all diſeaſes. There is no *Catholicon* or univerſal remedy I know, but this, which though nauſeous to queaſie ſtomachs, yet to prepared appetites is Nectar, and a pleaſant potion of immortality.

Sect. 10. For my Converſation: it is like the Suns, with all men, and with a friendly aſpect to good and bad. Methinks there is no man bad, and the worſt, beſt: that is, while they are kept within the circle of thoſe qualities, wherein there is good: There is no mans mind of ſuch diſcordant and jarring a temper, to which a tunable diſpoſition may not ſtrike a harmony. *Magnæ virtutes, nec minora vitia*; it is the poſie of the beſt natures, * and may be inverted on the worſt:] there are in the moſt depraved and venomous diſpoſitions, certain pieces that remain untoucht, which by an *Antiperiſtaſis* become more excellent, or by the excellency of their antipathies are able to preſerve themſelves from the contagion of their enemies vices, and perſiſt entire beyond the general corruption. For it is alſo thus in natures. The greateſt Balſams do lye enveloped in the bodies of the moſt powerful Corroſives: I ſay moreover, and I ground upon experience, * that poyſons contain within themſelves their own Antidote,] and that which preſerves them from the venom of themſelves, without which they were not deleterious to others only, but to themſelves alſo. But it is the corruption that I fear within me, not the contagion of commerce without me. 'Tis that unruly regiment within me, that will deſtroy me: 'tis I that do infect my ſelf: * the man without a Navel yet lives in me:] I feel that original Canker corrode and devour me: and therefore *Defenda me Dios de me*, Lord deliver me from my ſelf is a part of my Litany, and the firſt voice of my retired imaginations. There is no man alone, becauſe every man is a *Microcoſm*, and carries the whole World about him: *Nunquam minus ſolus quàm cùm ſolus*, though it be the Apothegm of a wiſe man, is yet true in the mouth of a Fool: for indeed, though in a Wilderneſs, a man is never alone, not only becauſe he is with himſelf, and his own thoughts, but becauſe he is with the Devil, who ever conſorts with our ſolitude, and is that unruly Rebel that muſters up thoſe diſordered motions which accompany our ſequeſtred imaginations: And to ſpeak more narrowly, there is no ſuch thing as ſolitude, nor any thing that can be ſaid to be alone, and by it ſelf, but God, who is his own circle, and can ſubſiſt by himſelf: all others, beſides their diſſimilary and Heterogeneous parts, which in a manner multiply their natures, cannot ſubſiſt without the concourſe of God, and the ſociety of that hand which doth uphold their natures. In brief, there can be nothing truly alone, and by its ſelf, which is not truly one: and ſuch is only God: All others do tranſcend an unity, and ſo by conſequence are many.

Sect. 11. Now for my life, it is a miracle of thirty years, which to relate, were not a Hiſtory, but a piece of Poetry, and would ſound to common ears like a Fable; for the World, I count it not an Inn, but an Hoſpital: and a place not to live, but to die in. The world that I regard is my ſelf: it is the Microcoſm of my own frame that I caſt mine eye on: for the other, I uſe it but like my Globe, and turn it round ſometimes for my recreation.

Men

Men that look upon my outside, perusing only my condition and Fortunes, do err in my Altitude; for I am above *Atlas* his shoulders. The earth is a point not only in respect of the Heavens above us: but of that Heavenly and Celestial part within us: that mass of flesh that circumscribes me, limits not my mind: that surface that tells the Heavens it hath an end, cannot perswade me I have any: I take my circle to be above three hundred and sixty; though the number of the Ark do measure my body, it comprehendeth not my mind: whilst I study to find how I am a Microcosm or little world, I find my self something more than the great. There is surely a piece of Divinity in us, something that was before the Elements, and owes no homage unto the Sun. Nature tells me I am the Image of God, as well as Scripture: he that understands not thus much, hath not his introduction or first lesson, and is yet to begin the Alphabet of man. Let me not injure the felicity of others, if I say I am as happy as any; *Ruat Cœlum, Fiat voluntas tua*, salveth all; so that whatsoever happens, it is but what our daily prayers desire. In brief, I am content, and what should Providence add more? Surely this is it we call happiness, and this do I enjoy, with this I am happy in a dream, and as content to enjoy a happiness in a fancy, as others in a more apparent truth, and reality. There is surely a nearer apprehension of any thing that delights us in our dreams, than in our waked senses; without this I were unhappy, for my awaked judgment discontents me, ever whispering unto me, that I am from my friend; but my friendly dreams in the night requite me, and make me think I am within his arms. I thank God for my happy dreams, as I do for my good rest, for there is a satisfaction in them unto reasonable desires, and such as can be content with a fit of happiness; and surely it is not a melancholy conceit to think we are all asleep in this world, and that the conceits of this life are as meer dreams to those of the next, as the Phantasms of the night, to the conceit of the day. There is an equal delusion in both, and the one doth but seem to be the emblem or picture of the other; we are somewhat more than our selves in our sleeps, and the slumber of the body seems to be but the waking of the soul. It is the ligation of sense, but the liberty of reason, and our waking conceptions do not match the Fancies of our sleeps. At my Nativity my Ascendant was the Earthly Sign of *Scorpius*; I was born in the Planetary hour of *Saturn*, and I think I have a piece of that Leaden Planet in me. I am no way facetious, nor disposed for the mirth and galliardize of company; yet in one dream I can compose a whole Comedy, behold the action, apprehend the Jests, and laugh my self awake at the conceits thereof: were my memory as faithful as my reason is then fruitful, I would never study but in my dreams; and this time also would I chuse for my devotions: but * our grosser memories have then so little hold of our abstracted understandings, that they forget the story, and can only relate to our awaked Souls, a confused and broken tale of that that hath passed.] *Aristotle*, who hath written a singular Tract of Sleep, hath not methinks throughly defined it; nor yet *Galen*, though he seem to have corrected it; for those *Noctambulo's* and Night-walkers, though in their sleep, do yet enjoy the action of their senses: we must therefore say that there is something in us that is not in the jurisdiction of *Morpheus*; and that those abstracted and ecstatick Souls do walk about in their own Corps, as Spirits with the Bodies they assume, wherein they seem to hear, see and feel, though indeed the Organs are destitute of sense, and their natures of those faculties that should inform them. Thus it is observed, that men sometimes upon the hour of their departure, do speak and reason above themselves. For then the Soul begins to be freed from the Ligaments of the body, begins to reason like her self, and to discourse in a strain above mortality.

Sect. 12. We term sleep a death, and yet it is waking that kills us, and destroys those Spirits that are the house of life. 'Tis indeed a part of life that best expresseth death; for every man truly lives, so long as he acts his nature, or some way makes good the faculties of himself: *Themistocles* therefore that slew

ſlew his Souldier in his ſleep, was a merciful Executioner; 'tis a kind of puniſhment the mildneſs of no Laws hath invented; * I wonder the fancy of *Lucan* and *Seneca* did not diſcover it.] It is that death by which we may be literally ſaid to die daily; a death which *Adam* died before his mortality; a death whereby we live a middle and moderating point between life and death; In fine, ſo like death, I dare not truſt it without my Prayers, and an half adieu unto the world, and take my farewel in a Colloquy with God.

The Night is come, like to the day;
Depart not thou, great God, away.
Let not my ſins, black as the Night,
Eclipſe the Luſtre of thy Light.
Keep ſtill in my Horizon; for to me
The Sun makes not the day, but thee.
Thou whoſe nature cannot ſleep,
On my Temples Centry keep;
Guard me 'gainſt thoſe watchful Foes,
Whoſe Eyes are open while mine cloſe.
Let no Dreams my Head infeſt,
But ſuch as Jacob's *Temples bleſt.*
While I do reſt, my Soul advance;
Make my ſleep a Holy Trance:
That I may, my reſt being wrought,
Awake into ſome holy thought.
And with as active vigour run
My courſe as doth the nimble Sun.
Sleep is a death, O make me try,
By ſleeping, what it is to die:
And as gently lay my Head
On my Grave, as now my Bed.
Howe're I reſt, great God, let me
Awake again at laſt with thee.
And thus aſſur'd, behold I lie
Securely, or to wake or die.
Theſe are my drowſie days; in vain
I do now wake to ſleep again:
O come that hour, when I ſhall never
Sleep again, but wake for ever.

This is the Dormitive I take to bedward; I need no other *Laudanum* than this to make me ſleep; after which I cloſe mine Eyes in ſecurity, content to take my leave of the Sun, and ſleep unto the Reſurrection.

The method I ſhould uſe in diſtributive Juſtice, I often obſerve in commutative; and keep a Geometrical proportion in both, whereby becoming equable to others, I become unjuſt to my ſelf, and ſupererogate in that common Principle, *Do unto others as thou wouldſt be done unto thy ſelf.* I was not born unto riches, neither is it, I think, my Star to be wealthy; or if it were, the freedom of my mind, and frankneſs of my diſpoſition, were able to contradict and croſs my fates: for to me avarice ſeems not ſo much a vice, as a deplorable piece of madneſs; * to conceive our ſelves Urinals, or be perſwaded that we are dead, is not ſo ridiculous,] nor ſo many degrees beyond the power of *Hellebore*, as this. The opinions of Theory, and poſitions of men, are not ſo void of reaſon, as their practiſed Concluſions: ſome have held that Snow is black, that the Earth moves, that the Soul is Air, Fire, Water; but all this is Philoſophy, and there is no *delirium*, if we do but ſpeculate the folly and indiſputable dotage of avarice to that ſubterraneous Idol, and God of the Earth. I do confeſs I am an Atheiſt, I *Sect.* 13.

cannot perſwade my ſelf to honour that the world adores; whatſoever vertue its prepared ſubſtance may have within my body, it hath no influence nor operation without: I would not entertain a baſe deſign, or an Action that ſhould call me Villain, for the *Indies*; and for this only do I love and honour my own Soul, and have methinks two Arms too few to embrace my ſelf. *Ariſtotle* is too ſevere, that will not allow us to be truly liberal without wealth, and the bountiful hand of Fortune; if this be true, I muſt confeſs I am charitable only in my liberal intentions, and bountiful well-wiſhes. But if the example of the Mite be not only an act of wonder, but an example of the nobleſt Charity, ſurely poor men may alſo build Hoſpitals, and the rich alone have not erected Cathedrals. I have a private method which others obſerve not; I take the opportunity of my ſelf to do good; I borrow occaſion of Charity from my own neceſſities, and ſupply the wants of others, when I am in moſt need my ſelf; for it is an honeſt ſtratagem to take advantage of our ſelves, and ſo to husband the acts of vertue, that where they are defective in one circumſtance, they may repay their want, and multiply their goodneſs in another. I have not *Peru* in my deſires, but a competence and ability to perform thoſe good works, to which he hath inclined my nature. He is rich, who hath enough to be charitable; and it is hard to be ſo poor, that a noble mind may not find a way to this piece of goodneſs. *He that giveth to the poor, lendeth to the Lord:* there is more Rhetorick in that one ſentence, than in a Library of Sermons: and indeed if thoſe ſentences were underſtood by the Reader, with the ſame Emphaſis as they are delivered by the Author, we needed not thoſe Volumes of inſtructions, but might be honeſt by an Epitome. Upon this motive only I cannot behold a Beggar without relieving his neceſſities with my purſe, or his Soul with my prayers; theſe ſcenical and accidental differences between us, cannot make me forget that common and untoucht part of us both; there is under theſe *Centoes* and miſerable outſides, thoſe mutilate and Semibodies, a ſoul of the ſame alloy with our own, whoſe Genealogy is God as well as ours, and in as fair a way to Salvation as our ſelves. Statiſts that labour to contrive a Commonwealth without poverty, take away the object of our charity, not underſtanding only the Commonwealth of a Chriſtian, but forgetting the Prophecie of Chriſt.

Sect. 14. Now there is another part of charity, which is the Baſis and Pillar of this, and that is the love of God, for whom we love our neighbour; for this I think Charity, to love God for himſelf, and our neighbour for God. All that is truly amiable is God, or as it were a divided piece of him, that retains a reflex or ſhadow of himſelf. Nor is it ſtrange that we ſhould place affection on that which is inviſible, all that we truly love is thus: what we adore under affection of our ſenſes, deſerves not the honour of ſo pure a Title. Thus we adore Vertue, though to the Eyes of ſenſe ſhe be inviſible: Thus that part of our noble Friends that we love, is not that part that we imbrace, but that inſenſible part that our Arms cannot embrace. God being all goodneſs, can love nothing but himſelf; he loves us but for that part which is as it were himſelf, and the traduction of his Holy Spirit. Let us call to aſſize the loves of our Parents, the affections of our Wives and Children, and they are all dumb ſhews and dreams, without reality, truth or conſtancy: for firſt there is a ſtrong Bond of affection between us and our Parents; yet how eaſily diſſolved? We betake our ſelves to a Woman, forgetting our Mother in a Wife, and the Womb that bare us, in that that ſhall bear our Image: this Woman bleſſing us with Children, our affection leaves the level it held before, and ſinks from our Bed unto our Iſſue and Picture of Poſterity, where affection holds no ſteady manſion. They, growing up in years, deſire our ends; or applying themſelves to a Woman, take a lawful way to love another better than our ſelves. Thus I perceive a man may be buried alive, and behold his Grave in his own iſſue.

I con-

I conclude therefore and ſay, there is no happineſs under (or as *Copernicus* will have it, above) the Sun; nor any *Crambe* in that repeated verity and burthen of all the Wiſdom of *Solomon*; *All is vanity and vexation of Spirit*; there is no felicity in that the World adores. *Ariſtotle* whilſt he labours to refute the Idea's of *Plato*, falls upon one himſelf: for his *ſummum bonum* is a *Chimæra*, and there is no ſuch thing as his Felicity. That wherein God himſelf is happy, the holy Angels are happy, in whoſe defect the Devils are unhappy; that dare I call happineſs: whatſoever conduceth unto this, may with an eaſie Metaphor, deſerve that name; whatſoever elſe the World terms Happineſs, is to me a ſtory out of *Pliny*; an Apparition or neat Deluſion, wherein there is no more of Happineſs, than the Name. Bleſs me in this life with but the Peace of my Conſcience, command of my affections, the love of thy ſelf and my deareſt friends, and I ſhall be happy enough to pity *Cæſar*. Theſe are, O Lord, the humble deſires of my moſt reaſonable ambition, and all I dare call Happineſs on earth; wherein I ſet no rule or limit to thy Hand of Providence; diſpoſe of me according to the wiſdom of thy pleaſure. Thy will be done, though in my own undoing.

FINIS.

ANNOTATIONS

UPON

Religio Medici.

Nec satis est vulgasse fidem.——————
Pet. Arbit. fragment.

LONDON,

Printed for *Robert Scott*, *Thomas Basset*, *Richard Chiswell*,
and the Executor of *John Wright*. 1686.

ANNOTATIONS

ON

Religio Medici.

THE ANNOTATOR TO THE READER.

A. Gellius (noct. Attic. l. 20. cap. *ult.*) *notes some Books that had strange Titles*; Pliny (Præfat. Nat. Hist.) *speaking of some such, could not pass them over without a jeer*; *So strange (saith he) are the Titles of some Books*, Ut multos ad vadimonium deferendum compellant. *And* Seneca *saith, some such there are*, Qui patri obstetricem parturienti filiæ accersenti moram injicere possint. *Of the same fate this present Tract* Religio Medici *hath partaken: Exception by some hath been taken to it in respect of its Inscription, which, say they, seems to imply, that* Physicians *have a Religion by themselves, which is more than Theology doth warrant: but it is their Inference, and not the Title that is to blame; for no more is meant by that, or endeavour'd to be prov'd in the* Book, *than that (contrary to the opinion of the unlearned)* Physicians *have Religion as well as other men.*

For the work it self, the present Age hath produced none that hath had better Reception amongst the learned; it hath been received and fostered by almost all, there having been but one that I know of (to verifie that Books have their Fate from the capacity of the Reader) *that hath had the face to appear against it; that is* Mr. Alexander * Rosse; *but he is dead, and it is uncomely to skirmish with his shadow. It shall be sufficient to remember to the* Reader, *that the noble and most learned* Knight, *Sir*

* In his Medicus Medicatus.

Sir Kenelm Digby, *has delivered his opinion of it in another sort, who though in some things he differ from the* Author's *sense, yet hath he most candidly and ingenuously allow'd it to be a* very learned and excellent piece; *and I think no Scholar will say there can be an approbation more authentick. Since the time he Published his Observations upon it, one Mr.* Jo. Merryweather *a* Master *of* Arts *of the* University *of* Cambridge, *hath deem'd it worthy to be put into the universal Language, which about the year* 1644 *he performed; and that hath carried the Authors name not only into the* Low-Countries *and* France, *(in both which places the Book in* Latin *hath since been Printed) but into* Italy *and* Germany, *and in* Germany *it hath since fallen into the hands of a Gentleman of that Nation* * *(of his name he hath given us no more than* L. N. M. E. N.) *who hath written Learned* Annotations *upon it in* Latin, *which were Printed together with the Book at* Strasbourg 1652. *And for the general good opinion the World had entertained both of the* Work *and* Author, *this Stranger tells you:* * Inter alios Auctores incidi in librum cui Titulus *Religio Medici*, jam antè mihi innotuerat lectionem istius libri multos præclaros viros delectâsse, imò occupâsse. Non ignorabam librum in *Anglia*, *Gallia*, *Italia*, *Belgio*, *Germania*, cupidissimè legi; constabat mihi eum non solum in *Anglia*, *Batavia*, sed & *Parisiis* cum præfatione, in qua Auctor magnis laudibus fertur, esse Typis mandatum. Compertum mihi erat multos magnos atq; eruditos viros censere Autorem (quantum ex hoc scripto perspici potest) sanctitate vitæ ac pietate elucere, *&c. But for the worth of the* Book *it is so well known to every* English*man that is fit to read it, that this attestation of a* Foreigner *may seem superfluous.*

* That he was a *German* appears by his notes, *pag.* 35. where he useth these words, *Dulcissima nostra Germania*, &c. * In *Præfat. Annotat.*

The German, *to do him right, hath in his* Annotations *given a fair Specimen of his Learning, shewing his skill in the Languages, as well ancient as modern; as also his acquaintance with all manner of Authors, both Sacred and Profane, out of which he hath amass'd a world of Quotations: but yet, not to mention that he hath not observed some Errors of the Press, and one or two main ones of the* Latin *Translation, whereby the Author is much injured; it cannot be denied but he hath past over many hard places untouch'd, that might deserve a Note; that he hath made* Annotations *on some, where no need was; in the explication of others hath gone besides the true sense.*

And were he free from all these, yet one great Fault there is he may

may be justly charged with, that is, that he cannot manum de Tabula *even in matters the most obvious: which is an affectation ill-becoming a* Scholar; *witness the most learned Annotator,* Claud. Minos. Divion. in præfat. commentar. Alciat. Emblemat. præfix. Præstat (*saith he*) breviùs omnia persequi, & leviter attingere quæ nemini esse ignota suspicari possint, quàm quasi ῥαψῳδεῖν, perque locos communes identidem expatiari.

I go not about by finding fault with his, obliquely to commend my own; I am as far from that, as 'tis possible others will be: All I seek by this Preface, next to acquainting the Reader with the various entertainment of the Book, is, that he would be advertiz'd, that these Notes were collected * *ten years since, long before the* German's *were written; so that I am no Plagiary (as who peruseth his Notes and mine, will easily perceive:) And in the second place, that I made this Recueil meerly for mine own entertainment, and not with any intention to evulge it; Truth is my witness, the publication proceeds meerly from the importunity of the Bookseller (my special friend) who being acquainted with what I had done, and about to set out another Edition of the Book, would not be denied these Notes to attex to it; 'tis he (not I) that divulgeth it, and whatever the success be, he alone is concern'd in it; I only say for my self what my Annotations bear in the Frontispiece.*

* Excepting two or three particulars in which reference is made to some Books that came over since that time.

Nec satis est vulgâsse fidem——

that is, that it was not enough to all persons (though pretenders to Learning) that our Physician *had published his Creed, because he wanted an Exposition. I say further, that the* German's *is not full; and that (*—— Quicquid sum Ego quamvis infra Lucilli censum ingeniumq;——*) my Explications do in many things illustrate the Text of my Author.*

24. Martii, 1654.

ANNOTATIONS UPON RELIGIO MEDICI.

THE EPISTLE TO THE READER.

CErtainly that man were greedy of Life, who ſhould deſire to live when all the World were at an end;] This Mr. *Merryweather* hath rendred thus; *Cupidum eſſe vitæ oportet, qui univerſo jam expirante mundo vivere cuperet*; and well enough: but it is not amiſs to remember, that we have this ſaying in *Seneca* the *Tragœdian*, who gives it us thus, *Vitæ eſt avidus quiſquis non vult mundo ſecum pereunte mori.*

There are many things delivered Rhetorically.] The Author herein intimates the ingenuity of St. *Auſtin*, who in his *Retract.* corrects himſelf for having delivered ſome things more like a young Rhetorician than a ſound Divine: but though St. *Aug.* doth deſervedly acknowledge it a fault in himſelf, in that he voluntarily publiſhed ſuch things, yet cannot it be ſo in this Author, in that he intended no publication of it, as he profeſſeth in this Epiſtle, and in that other to Sir *Kenelm Digby.*

THE

THE FIRST PART.

THE general ſcandal of my Profeſſion.] Phyſicians (of the number whereof it appears by ſeveral paſſages in this Book the Author is one) do commonly hear ill in this behalf. It is a common ſpeech (but only amongſt the unlearn'd ſort) *Ubi tres Medici, duo Athei.* The reaſons why thoſe of that Profeſſion (I declare my ſelf that I am none, but *Cauſarum Actor mediocris*, to uſe *Horace* his Phraſe) may be thought to deſerve that cenſure, the Author rendreth *Sect.* 19. *Sect.* 1. Page 1.

The natural courſe of my ſtudies.] The vulgar lay not the imputation of Atheiſm only upon Phyſicians, but upon Philoſophers in general, who for that they give themſelves to underſtand the operations of *Nature*, they calumniate them, as though they reſted in the ſecond Cauſes, without any reſpect to the firſt. Hereupon it was, that in the tenth Age Pope *Silveſter* the ſecond paſs'd for a Magician, becauſe he underſtood Geometry and natural Philoſophy. *Baron. Annal.* 990. And *Apuleius* long before him laboured of the ſame ſuſpicion, upon no better ground; he was accus'd, and made a learned Apology for himſelf, and in that hath laid down what the ground is of ſuch accuſations, in theſe words: *Hæc fermè communi quodam errore imperitorum Philoſophis objectantur; ut partem eorum qui corporum cauſas meras ſimplices rimantur, irreligioſos putant, eoſque aiunt Deos abnuere, ut Anaxagoram, & Leucippum, & Democritum, & Epicurum, cæteróſq; rerum naturæ Patronos.* Apul. in Apolog. And it is poſſible that thoſe that look upon the ſecond Cauſes ſcattered, may reſt in them and go no further, as my Lord *Bacon* in one of his *Eſſayes* obſerveth; but our Author tells us there is a true Philoſophy from which no man becomes an Atheiſt, *Sect.* 46.

The indifference of my behaviour and Diſcourſe in matters of Religion.] Bigots are ſo overſway'd by a prepoſterous zeal, that they hate all moderation in diſcourſe of Religion; they are the men forſooth —— *qui ſolos credant habendos eſſe Deos quos ipſi colunt.* *Eraſmus* upon this account makes a great complaint to Sir *Tho. More* in an Epiſtle of his touching one *Dorpius* a Divine of *Lovain*, who becauſe, upon occaſion of diſcourſe betwixt them, *Eraſmus* would not promiſe him to write againſt *Luther*, told *Eraſmus* that he was a *Lutheran*, and afterwards publiſhed him for ſuch; and yet as *Eraſmus* was reputed no very good Catholick, ſo for certain he was no Proteſtant.

Not that I meerly owe this Title to the Font] as moſt do, taking up their Religion according to the way of their Anceſtors; this is to be blamed amongſt all Perſons; It was practiſed as well amongſt Heathens as Chriſtians.

Per caput hoc juro per quod Pater antè ſolebat, ſaith *Aſcanius* in *Virgil*: and *Apuleius* notes it for an abſurdity: *Utrum Philoſopho putas turpe ſcire iſta, an*

an nescire? negligere, an curare? nosse quanta sit etiam in istis providentiæ ratio, an de diis immortalibus Matri & Patri credere? saith he in *Apolog.* and so doth *Minutius. Unusquisq vestrum non cogitat prius se debere Deum nosse quam colere, &c.* Minut. *in* Octav.

But having in my riper years examined, &c.] according to the Apostolical Precept, *Omnia probate, quod bonum est tenete.*

Sect. 2. Page 1. *There being a Geography of Religion*] *i. e.* of Christian Religion, which you may see described in Mr. *Brerewood*'s Enquiries: he means not of the Protestant Religion; for though there be a difference in Discipline, yet the *Anglican, Scotick, Belgick, Gallican,* and *Helvetick* Churches differ not in any essential matter of the Doctrine, as by the *Harmony* of *Confessions* appears. 5. Epist. *Theod. Bezæ Edmundo Grindallo Ep. Londinens.*

Wherein I dislike nothing but the Name.] that is, *Lutheran, Calvinist, Zuinglian,* &c.

Now the accidental occasion whereupon, &c.] This is graphically described by *Thuanus* in his History: but because his words are too large for this purpose, I shall give it you somewhat more briefly, according to the relation of the Author of the History of the Council of *Trent.* The occasion was the necessity of Pope *Leo* the Tenth, who by his profusion had so exhausted the Treasure of the *Church,* that he was constrained to have recourse to the publishing of Indulgences to raise monies: some of which he had destined to his own Treasury, and other part to his Allyes, and particularly to his Sister he gave all the money that should be raised in *Saxony*; and she, that she might make the best profit of the Donation, commits it to one *Aremboldus,* a Bishop, to appoint Treasurers for these Indulgences. Now the custom was, that whensoever these Indulgences were sent into *Saxony,* they were to be divulged by the Fryars *Eremites,* (of which Order *Luther* then was) but *Aremboldus* his Agents thinking with themselves, that the Fryars *Eremites* were not so well acquainted with the trade, that if the business should be left to them, they should either be able to give so good an account of their Negotiation, or get so much themselves by it as they might do in case the Business were committed to another Order; they thereupon recommend it to (and the business is undertaken by) the *Dominican* Fryars, who performed it so ill, that the scandal arising both from thence, and from the ill lives of those that set them on work, stirred up *Luther* to write against the abuses of these Indulgences; which was all he did at first; but then, not long after being provoked by some Sermons and small Discourses that had been published against what he had written, he rips up the *business* from the beginning, and publishes xcv. *Theses* against it at *Wittenburg.* Against these *Tekel* a *Dominican* writes; then *Luther* adds an explication to his. *Eckius* and *Prierius,* Dominicans, thereupon take up the controversie against him: and now *Luther* begins to be hot; and because his adversaries could not found the matter of Indulgences upon other Foundations than the *Popes* power and infallibility, that begets a disputation betwixt them concerning the Popes power, which *Luther* insists upon as inferiour to that of a *general Council*; and so by degrees he came on to oppose the Popish Doctrine of *Remission of sins, Penances,* and *Purgatory*; and by reason of Cardinal *Cajetan*'s imprudent mannagement of the conference he had with him, it came to pass that he rejected the whole body of Popish doctrine. So that by this we may see what was the accidental occasion wherein, the slender means whereby, and the abject condition of the person by whom, the work of Reformation of Religion was set on foot.

Sect. 3. Page 2. *Yet I have not so shaken hands with those desperate Resolutions,* (*Resolvers it should be, without doubt*) *who had rather venture at large their decayed Bottom, than bring her in to be new trimm'd in the Dock; who had rather promiscuously retain all, than abridge any; and obstinately be what they are, than what they have been; as to stand in diameter and at Swords point with them: we have reformed from them, not against them,* &c.] These words by Mr. *Merryweather* are thus rendred, *sc. Nec tamen in vecordem illum pertinacium hominum gregem memet adjungo, qui labefactatum navigium malu t for tunæ committere quam in navale de integro resarciendum deducere; qui malu it omnia promiscue retinere quam*

quicquam

quicquam inde diminuere, & pertinaciter esse qui sunt quam qui olim fuerunt; ita ut iisdem ex diametro repugnent: ab illis, non contra illos, reformationem instituimus, &c. And the Latine Annotator sits down very well satisfied with it, and hath bestowed some notes upon it; but under the favour both of him, and the Translator, this Translation is so far different from the sence of the Author, that it hath no sense in it; or if there be any construction of sense in it, it is quite besides the Authors meaning; which will appear if we consider the context: by that we shall find that the Author in giving an account of his Religion, tells us first that he is a Christian, and farther, that he is of the reform'd Religion; but yet he saith, in this place, he is not so rigid a Protestant, nor at defiance with Papists so far, but that in many things he can comply with them, (the particulars he afterwards mentions in this Section) for, saith he, we have reform'd from them, not against them; that, is, as the *Archbishop* of *Canterbury* against the *Jesuit* discourseth well, We have made no new Religion nor Schism from the old; but in calling for the old, and desiring that which was novel and crept in might be rejected, and the Church of *Rome* refusing it, we have reform'd from those upstart novel Doctrines, but against none of the old: and other sense the place cannot bear; therefore how the *Latine Annotator* can apply it as though in this place the Author intended to note the *Anabaptists*, I see not, unless it were in respect of the expression *Vecordem pertinacium hominum gregem*, which truly is a description well befitting them, though not intended to them in this place: however, I see not any ground from hence to conclude the Author to be any whit inclining to the *Bulk* of Popery (but have great reason from many passages in this Book to believe the contrary,) as he that prefix'd a Preface to the *Parisian* Edition of this Book hath unwarrantably done.

But for the mistake of the Translator, it is very obvious from whence that arose. I doubt not but it was from mistake of the sense of the English Phrase *Shaken hands*, which he hath rendred by these words, *Memet adjungo*, wherein he hath too much play'd the Scholar, and shewed himself to be more skilful in foreign and antient customs, than in the vernacular practice and usage of the language of his own Country; for although amongst the Latines protension of the Hand were a Symbol and sign of Peace and Concord (as *Alex. ab Alexandro*; *Manum vero protendere, pacem peti significabant* (saith he) *Gen. Diet. lib. 4. cap. ult.* which also is confirmed by *Cicero pro Dejotaro*; and *Cæsar. l. 2. de Bello Gallico* and was used in their first meetings, as appears by the Phrase, *Jungere hospitio Dextras*; and by that of *Virgil*,

Oremus pacem, & Dextras tendamus inermes.

and many like passages that occur in the Poets, to which I believe the Translator had respect: yet in modern practice, especially with us in *England*, that ceremony is used as much in our *Adieu's* as in the *first Congress*; and so the Author meant in this place, by saying he had not *shaken hands*; that is, that he had not so deserted, or bid farewel to the *Romanists*, as to stand at Swords point with them: and then he gives his Reasons at those words, *For omitting those improperations*, &c. So that instead of *memet adjungo*, the Translator should have used some Word or Phrase of a clean contrary signification; and instead of *ex diametro repugnent*, it should be *repugnem*.

Henry *the Eighth, though he rejected the Pope, refused not the faith of* Rome.] So much *Buchanan* in his own life written by himself testifieth, who speaking of his coming into *England* about the latter end of that Kings time, saith, *Sed ibi tum omnia adeo erant incerta, ut eodem die, ac eodem igne* (very strange!) *utriusque factionis homines cremarentur, Henrico 8. jam seniore suæ magis securitati quam Religionis puritati intento.* And for the confirmation of this assertion of the Author, *vide Stat. 31 H. 8. cap. 14.*

And was conceived the State of Venice *would have attempted in our dayes.*] This expectation was in the time of Pope *Paul* the Fifth, who by excommunicating that Republique, gave occasion to the Senate to banish all such of the Clergy as would not by reason of the Popes command, administer the Sacraments; and upon that account the *Jesuits* were cast out, and never since receiv'd into that State.

Or

Sect. 6. Page 3. *Or be angry with his judgement for not agreeing with me in that, from which perhaps within a few days I should dissent my self.*] I cannot think but in this expression the Author had respect to that of that excellent French Writer *Monsieur Mountaign* (in whom I often trace him.) *Combien diversement jugeons nous de choses? Combien de fois changeons nous nos fantasies? Ce que je tien aujourdhuy, ce que je croy, je le tien & le croy de toute ma Creance, mais ne m'est il pas advenu non une fois mais cent, mais mille & tous les jours d'avoir embrasse quelque autre chose?* Mountaign liv. 2. *Des Essais* Chap. 12.

Every man is not a proper Champion for truth, &c.] A good cause is never betray'd more than when it is prosecuted with much eagerness, and but little sufficiency; and therefore *Zuinglius*, though he were of *Carolostadius* his opinion in the point of the Sacrament of the *Eucharist* against *Luther*; yet he blamed him for undertaking the defence of that Cause against *Luther*; not judging him able enough for the encounter: *Non satis habet humerorum*, saith he of *Carolostad*, alluding to that of *Horace*, *Sumite materiam vestris qui scribitis æquam Viribus, & versate diu quid ferre recusent, Quid valeant humeri.*—— So *Minutius Fœlix*; *Plerumq; pro differentium viribus & eloquentiæ potestate, etiam perspicuæ veritatis conditio mutetur.* Minut. in Octav. And *Lactantius* saith this truth is verified in *Minutius* himself: for *Him*, *Tertullian* and *Cyprian*, he spares not to blame (all of them) as if they had not with dexterity enough defended the Christian cause against the *Ethnicks*. *Lactant. de justitia*, cap. 1. I could wish that those that succeeded him had not as much cause of complaint against him: surely he is noted to have many errors *contra fidem.*

In Philosophy——there is no man more Paradoxical than my self, but in Divinity I love to keep the Road, &c.] Appositely to the mind of the Author, saith the Publisher of Mr. *Pembel's* Book *de origine formarum*, *Certe* (saith he) *in locis Theologicis ne quid detrimenti capiat vel Pax, vel Veritas Christi—— à novarum opinionum pruritu prorsus abstinendum puto, usq; adeo ut ad certam regulam etiam loqui debeamus, quod pie & prudenter monet Augustinus* (*de Civ. Dei*, l. 10. cap. 23.) [*ne verborum licentia impia vi gignat opinionem,*] *at in pulvere Scholastico in nullius verba juramus, & in utramvis partem sine dispendio vel pacis vel salutis ire liceat, major conceditur cum sentiendi tum loquendi libertas,* &c. Capet. *in Ep. Dedicat. Pembel. de origine form. præfix.*

Heresies perish not with their Authors, but like the River Arethusa, *though they lose their currents in one place, they rise again in another.*] Who would not think that this expression were taken from Mr. *Mountaigne, pl. 2. des Ess. cap.* 12. where he hath these words, *Nature enferre dans les termes de son progres ordinaire comme toutes autres choses aussi les creances les jugements & opinions des hommes elles ont leur revolutions*; and that *Mountaigne* took his from *Tully*. *Non enim hominum interitu sententiæ quoque occidunt. Tull. de nat. deorum l.* 1. &c. Of the River *Arethusa* thus *Seneca*. *Videbis celebratissimum carminibus fontem Arethusam limpidissimi ac perlucidissimi ad imum stagni gelidissimas aquas profundentem, sive illas primum nascentes invenit, sive flumen integrum subter tot maria, & à confusione pejoris undæ servatum reddidit.* Senec. *de consolat. ad Martiam.*

Sect. 7. Page 4. *Now the first of mine was that of the* Arabians.] For this Heresie, the Author here sheweth what it was; they are called *Arabians* from the place where it was fostered; and because the *Heresiarch* was not known, *Euseb.* St. *Aug.* and *Nicephorus* do all write of it: the reason of this Heresie was so specious, that it drew Pope *John* 22. to be of the same perswasion. Where then was his infallibility? Why, *Bellarmine* tells you he was never the less infallible for that: for saith he, he maintained this opinion when he might do it without peril of Heresie, for that no definition of the Church whereby 'twas made Heresie, had preceded when he held that opinion. *Bellar. l. 4. de Pontif. Roman. cap.* 4. Now this definition was first made ('tis true) by Pope *Benedict* in the 14. Age: but then I would ask another question, that is, if till that time there were nothing defined in the Church touching the beatitude of Saints? What certainty was there touching the sanctity of any man? and upon what ground were those canonizations of Saints had, that were before the 14. Age?

The

The second was that of Origen.] Besides St. *Augustine*, *Epiphanius*, and also St. *Hierom*, doth relate that *Origen* held, that not only the Souls of men, but the *Devils* themselves should be discharged from tortures after a certain time: but *Genebrard* endeavours to clear him of this. *Vid. Coquæum, in* 21. *lib. Aug. de Civ. Dei, c.* 17.

These opinions though condemned by lawful Councils, were not Heresie in me, &c.] For to make an Heretick, there must be not only *Error in intellectu*, but *pertinacia in voluntate*. So St. *Aug. Qui sententiam suam quamvis falsam atque perversam nullâ pertinaci animositate defendunt, quærunt autem cautâ solicitudine veritatem, corrigi parati cùm invenerint, nequaquam sunt inter Hæreticos deputandi.* Aug. *cont. Manich.* 24. *qu.* 3.

The deepest mysteries that ours contains have not only been illustrated, but maintained by Syllogism and the Rule of Reason.] and since this Book was written, by Mr. *White* in his *Institutiones Sacræ*. *Sect.* 9. Pag. 5.

And when they have seen the Red Sea, doubt not of the miracle.] Those that have seen it, have been better informed than Sir *Henry Blount* was, for he tells us that he desired to view the passage of *Moses* into the Red Sea (not being above three days journey off) but the *Jews* told him the precise place was not known within less than the space of a days journey along the shoar; wherefore (saith he) I left that as too uncertain for any observation. *In his Voyage into the Levant.*

I had as lieve you tell me that *anima est angelus hominis, est corpus Dei*, as *Entelechia*; *Lux est umbra Dei*, as *actus perspicui*.] Great variety of opinions there hath been amongst the ancient Philosophers touching the definition of the Soul. *Thales* his was, that it is a *Nature without Repose*: *Asclepiades*, that it is an *Exercitation of sense*: *Hesiod*, that it is *a thing composed of Earth and Water*; *Parmenides* holds, *of Earth and Fire*; *Galen*, that it is *Heat*; *Hippocrates*, that it is *a Spirit diffused through the body*; some others have held it to be *Light*; *Plato* saith, 'tis *a Substance moving it self*; after cometh *Aristotle* (whom the Author here reproveth) and goeth a degree farther, and saith it is *Entelechia*, that is, that which naturally makes the body to move. But this definition is as rigid as any of the other; for this tells us not what the *essence*, *origine* or *nature* of the *Soul* is, but only marks an *effect* of it, and therefore signifieth no more than if he had said (as the Author's Phrase is) that it is *Angelus hominis*, or an *Intelligence* that moveth man, as he supposed those other to do the Heavens. *Sect.* 10. Pag. 5.

Now to come to the definition of Light, in which the Author is also unsatisfied with the School of *Aristotle*, he saith, it satisfieth him no more to tell him that *Lux est actus perspicui*, than if you should tell him that it is *umbra Dei*. The ground of this definition given by the Peripateticks, is taken from a passage in *Aristot. de anima l.* 2. *cap.* 7. where *Aristotle* saith, that the colour of the thing seen, doth move that which is *perspicuum actu* (i.e. *illustratam naturam quæ sit in aere aliove corpore transparente*) and that that, in regard of its continuation to the Eye, moveth the Eye, and by its help the internal *sensorium*; and that so vision is perform'd. Now as it is true that the Sectators of *Aristotle* are to blame, by fastening upon him by occasion of this passage, that he meant that those things that made this impress upon the Organs are meer accidents, and have nothing of substance; which is more than ever he meant, and cannot be maintained without violence to Reason, and his own Principles; so for *Aristotle* himself, no man is beholding to him for any Science acquired by this definition: for what is any man the near for his telling him that Colour (admitting it to be a body, as indeed it is, and in that place he doth not deny) doth move *actu perspicuum*, when as the perspicuity is in relation to the Eye; and he doth not say how it comes to be perspicuous, which is the thing enquired after, but gives it that donation, before the Eye hath perform'd its office; so that if he had said it had been *umbra Dei*, it would have been as intelligible, as what he hath said. He that would be satisfied how Vision is perform'd, let him see Mr. *Hobbs* in *Tract. de nat. human.* cap. 2.

For

For God had not caused it to rain upon the Earth.] St. *Aug. de Genes. ad literam*, cap. 5, 6. salves that expression from any inconvenience; but the Author in *Pseudodox. Epidemic.* l. 7. cap. 1. shews that we have no reason to be confident that this Fruit was an *Apple*.

I believe that the Serpent (*if we shall literally understand it*) *from his proper form and figure made his motion on his Belly before the Curse.*] Yet the Author himself sheweth in *Pseudodox. Epidemic.* lib. 7. cap. 1. that the form or kind of the *Serpent* is not agreed on: yet *Comestor* affirm'd it was a *Dragon*, *Engubinus* a *Basilisk*, *Delrio* a *Viper*, and others a common *Snake*: but of what kind soever it was, he sheweth in the same Volume, *lib.* 5. *c.* 4. that there was no inconvenience, that the temptation should be perform'd in this proper shape.

I find the trial of the Pucelage and Virginity of Women which God ordained the Jews, *is very fallible*;] *Locus extat, Deut. c.* 22. the same is affirm'd by *Laurentius* in his *Anatom.*

Whole Nations have escaped the curse of Child-birth, which God seems to pronounce upon the whole Sex. This is attested by *M. Montaigne, Les doleurs de l'enfantiment par les medicines, & pardein mesme estimes grandes, & que nous pasons avec tant de Ceremonies, il y a des nations entieres qui ne'n fuit nul conte. l.* 1. *des Ess.* c. 14.

Sect. 11. Pag. 6. *Who can speak of* Eternity *without a Solœcism, or think thereof without an Ecstasie?* Time *we may comprehend*, &c.] Touching the difference betwixt *Eternity* and *Time*, there have been great disputes amongst Philosophers; some affirming it to be no more than *duration perpetual consisting of parts*; and others (to which opinion, it appears by what follows in this Section, the Author adheres) affirmed (to use the Authors Phrase) that it hath no distinction of Tenses, but is according to *Boëtius* (*lib.* 5. *consol. pros.* 6.) his definition, *interminabilis vitæ tota simul & perfecta possessio.* For me, *non nostrum est tantas componere lites*; I shall only observe what each of them hath to say against the other. Say those of the first opinion against those that follow *Boëtius* his definition, That definition was taken by *Boëtius* out of *Plato's Timæus*, and is otherwise applied, though not by *Boëtius*, yet by those that follow him, than ever *Plato* intended it; for he did not take it in the Abstract, but in the Concrete, for an *eternal thing, a Divine substance*, by which he meant *God*, or his *Anima mundi*: and this he did, to the intent to establish this truth, That no mutation can befal the Divine Majesty, as it doth to things subject to generation and corruption; and that *Plato* there intended not to define or describe any species of duration: and they say that it is impossible to understand any such species of duration that is (according to the Author's expression) but one *permanent point.*

Now that which those that follow *Boëtius* urge against the other definition is, they say, it doth not at all difference *Eternity* from the nature of *Time*; for they say if it be composed of many *Nunc's*, or many instants, by the addition of one more it is still increased; and by that means *Infinity* or *Eternity* is not included, nor ought more than *Time*. For this, see Mr. *White, de Dial. mundo, Dial.* 3. *Nod.* 4.

Indeed he only is, &c.] This the Author infers from the words of God to *Moses*, *I am that I am*; and this to distinguish him from all others, who (he saith) have been and shall be: but those that are learned in the *Hebrew*, do affirm that the words in that place (*Exod.* 3.) do not signifie, *Ego sum qui sum, & qui est*, &c. but *Ero qui ero, & qui erit*, &c. *vid. Gassend. in animad. Epicur. Physiolog.*

Sect. 12. Pag. 6. *I wonder how* Aristotle *could conceive the World Eternal, or how he could make good two Eternities:*] (that is, that God, and the World both were eternal.) I wonder more at either the ignorance or incogitancy of the *Conimbricenses*, who in their Comment upon the eighth Book of *Aristotle's Physicks*, treating of the matter of Creation, when they had first said that it was possible to know it, and that actually it was known (for *Aristotle* knew it) yet for all this they afterwards affirm, that considering only the light of Nature, there is nothing can be brought to demonstrate Creation; and yet farther when they had defined Creation to be the production of a thing *ex nihilo*, and had pro-

ved

ved that the World was ſo created in time, and refuſed the arguments of the Philoſophers to the contrary; they added this, that the World might be created *ab æterno:* for having propos'd this queſtion [*Num aliquid à Deo ex Æternitate procreari potuit?*] they defend the affirmative, and aſſert that not only incorporeal ſubſtances, as Angels; or permanent, as the celeſtial Bodies; but corruptible, as Men, *&c.* might be produced and made *ab æterno,* and be conſerved by an infinite time, *ex utraq; parte:* and that this is neither repugnant to God the Creator, the things created, nor to the nature of Creation: for proof whereof, they bring inſtances of the *Sun,* which if it had been eternal, had illuminated eternally, (and the vertue of God is not leſs than the vertue of the Sun.) Another inſtance they bring of the *Divine Word,* which was produc'd *ab æterno:* in which diſcourſe, and in the inſtances brought to maintain it, it is hard to ſay whether the madneſs or impiety be greater: and certainly if Chriſtians thus argue, we have the more reaſon to pardon the poor heathen *Ariſtotle.*

There is in us not three, but a Trinity of Souls.] The *Peripateticks* held that men had three diſtinct Souls: whom the Hereticks, the *Anomæi,* and the *Jacobites,* followed. There aroſe a great diſpute about this matter in *Oxford,* in the year 1276. and it was then determined againſt *Ariſtotle. Danæus Chriſt. Eth.* l. 1. c. 4. and *Suarez* in his Treatiſe *de cauſa formali, Quæſt. An dentur plures formæ in uno compoſito,* affirmeth there was a Synod that did *anathematize* all that held with *Ariſtotle* in this point.

There is but one firſt cauſe, and four ſecond cauſes in all things.] In that he ſaith there is but one firſt cauſe, he ſpeaketh in oppoſition to the *Manichees,* who held there were *Duo principia;* one from whom came all good, and the other from whom came all evil: the reaſon of *Protagoras* did it ſeems impoſe upon their underſtandings; he was wont to ſay, *Si Deus non eſt, unde igitur bona? Si autem eſt, unde mala?* In that he ſaith there are but four ſecond Cauſes, he oppoſeth *Plato,* who to the four cauſes, *material, efficient, formal,* and *final,* adds for a fifth, *exemplar* or *idea,* ſc. *Id ad quod reſpiciens artifex, id quod deſtinabat, efficit;* according to whoſe mind *Boëtius* ſpeaks, *lib.* 3. *met.* 9. *de conſ. Philoſoph.* *Sect.* 14. Page 8.

O qui perpetuâ mundum ratione gubernas,
Terrarum Cœliq; ſator, qui tempus ab ævo
Ire jubes, ſtabiliſq; manens das cuncta moveri:
Quem non externæ pepulerunt fingere cauſæ
Materiæ fluitantis opus, verùm inſita ſummi
Forma boni livore carens: tu cuncta ſuperno
Ducis ab exemplo, pulchrum pulcherrimus ipſe
Mundum mente gerens, ſimilique in imagine formans,
Perfectáſq; jubens perfectum abſolvere partes.

And St. *Auguſtine* l. 83. *Quæſt.* 46. where (amongſt other) he hath theſe words, *Reſtat ergo ut omnia ratione ſint condita, nec eâdem ratione homo quâ equus; hoc enim abſurdum eſt exiſtimare: ſingula autem propriis ſunt creata rationibus.* But theſe *ideæ Plato*'s Scholar *Ariſtotle* would not allow to make or conſtitute a different ſort of cauſe from the *formal* or *efficient;* to which purpoſe he diſputes, *l.* 7. *Metaphyſic.* but he and his Sectators, and the *Ramiſts* alſo, agree (as the Author) that there are but the four remembred Cauſes: ſo that the Author, in affirming there are but four, hath no Adverſary but the *Platoniſts;* but yet in aſſerting there are four (as his words imply) there are that oppoſe him, and the *Schools* of *Ariſtotle* and *Ramus.* I ſhall bring for inſtance Mr. *Nat. Carpenter,* who in his *Philoſophia Libera* affirmeth there is no ſuch cauſe as that which they call the *Final Cauſe:* he argueth thus: Every cauſe hath an influence upon its effect: but ſo has not the End, therefore it is not a cauſe. The *major* propoſition (he ſaith) is evident, becauſe the influence of a cauſe upon its effect, is either the cauſality it ſelf, or ſomething that is neceſſarily conjoyned to it: and the *minor* as plain, for either the End hath an influence upon the effect immediately, or mediately, by ſtirring up

the efficient to operate; not immediately, becauſe ſo it ſhould enter either the *conſtitution*, or *production*, or *conſervation* of the things; but the conſtitution it cannot enter, becauſe the conſtitution is only of *matter* and *form*; nor the Production, for ſo it ſhould concur to the production, either as it is *ſimply the end* or as *an exciter of the efficient*; but not ſimply as the end, becauſe the end *as end* doth not go before, but followeth the thing produced, and therefore doth not concur to its production: If they ſay it doth ſo far concur, as it is deſired of the agent or efficient cauſe, it ſhould not ſo have an immediate influence upon the effect, but ſhould only firſt move the efficient. Laſtly, ſaith he, it doth not enter the conſervation of a thing, becauſe a thing is often conſerved, when it is fruſtrate of its due end, as when it's converted to a new uſe and end. Divers other arguments he hath to prove there is no ſuch Cauſe as the final Cauſe. *Nat. Carpenter Philoſoph. libr. Decad.* 3. *Exercitat.* 5. But for all this, the Author and he differ not in ſubſtance: for 'tis not the Author's intention to aſſert that the end is in nature præexiſtent to the effect, but only that whatſoever God has made, he hath made to ſome end or other; which he doth to oppoſe the Sectators of *Epicurus*, who maintain the contrary, as is to be ſeen by this of *Lucretius* which follows.

Illud in his rebus vitium vehementer, & iſtum
Effugere errorem, vitaréque præmeditator,
Lumina nè facias oculorum clara creata,
Proſpicere ut poſſimus, & ut proferre viai
Proceros paſſus; ideo faſtigia poſſe
Surarum ac feminum pedibus fundata plicari:
Brachia tum porro validis ex apta lacertis
Eſſe, manuſq; datas utraq; à parte miniſtras,
Ut facere ad vitam poſſimus, quæ foret uſus:
Catera de genere hoc inter quæcunq; precantur,
Omnia perverſâ præpoſtera ſunt ratione:
Nil ideo quoniam natum'ſt in corpore, ut uti
Poſſemus; ſed quod natum'ſt, id procreat uſum.
Nec fuit ante videre oculorum lumina nata,
Nec dictis orare prius, quàm lingua creata'ſt,
Sed potius longè linguæ præceſſit origo
Sermonem; multoq; creata ſunt priùs aures,
Quàm ſonus eſt auditus: & omnia deniq; membra
Ante fuere, ut opinor, eorum quàm foret uſus:
Haud igitur potûere utendi creſcere cauſa.

Lucret. Lib. 4.

Sect. 15. Pag. 8. *There are no Groteſques in nature*, &c.] So *Monſieur Montaign. Il n'y 'a rien d' mutil en nature, non pas l' inutilite meſmes, rien ne s'eſt jugere en cet Univers que n'y tienne place opportun.* Eſſ. l. 3. c. 1.

Who admires not Regio-montanus *his Fly beyond his Eagle?*] Of theſe *Du Bartas*.

Que diray je de l' aigle?
D'ont un doct Aleman honore noſtre ſiecle
Aigle qui diſlogeant de la maiſtreſſe main,
Aila loin au devant d' un Empereur Germain;
Et l'ayant recontre, ſuddain d'un e aiſle accorte,
Se tournant le ſuit au ſue il de la porte
Du fort Norembergois, que lis piliers dorez,
Les tapiſſez chemins, les ares elabourez,
Les fourdroyans Canons, in la jeuſneſſe iſnelle,
In le chena Senat, n' honoreit tant come elle.

Un

Un jour, que cetominer plus des esbats, que de mets,
En prive, faſteyoit ſes ſeignieurs plus amees,
Une mouſche de fer, dans ſa main recelee,
Pritſans ayde d' autroy, ſa gallard evolee:
Fit une entiere Ronde, & puis d'un cerveau las
Come ayant jugement, ſe purcha ſur ſon bras.

Thus Engliſhed by *Silveſter.*

Why ſhould not I that wooden Eagle mention?
(A learned German's *late admir'd invention)*
Which mounting from his Fiſt that framed her,
Flew far to meet an Almain *Emperour:*
And having met him, with her nimble train,
And weary Wings turning about again,
Followed him cloſe unto the Caſtle Gate
of Noremberg; *whom all the ſhows of ſtate,*
Streets hang'd with Arras, Arches curious built,
Loud thundring Cannons, Columns richly gilt,
Gray-headed Senate, and youth's gallantiſe,
Grac'd not ſo much as only this device.
Once as this Artiſt more with mirth than meat,
Feaſted ſome friends that he eſteemed great;
From under's hand an Iron Fly flew out,
Which having flown a perfect round about,
With weary wings, return'd unto her Maſter,
And (as judicious) on his arm ſhe plac'd her.

Or wonders not more at the operation of two ſouls in thoſe little bodies, than but one in the Trunk of a Cedar?] That is, the *vegetative*, which according to the common opinion, is ſuppoſed to be in *Trees*, though the *Epicureans* and *Stoicks* would not allow any Soul in Plants; but *Empedocles* and *Plato* allowed them not only a *vegetative* Soul, but affirm'd them to be *Animals*. The *Manichees* went farther, and attributed ſo much of the rational Soul to them, that they accounted it *Homicide* to gather either the Flowers or Fruit, as St. *Aug.* reports.

We carry with us the wonders we ſeek without us.] So St. *Aug.* l. 10. de civ. c. 3. *Omni miraculo quod fit per hominem, majus miraculum eſt homo.*

Another of his ſervant Nature, that publick and univerſal Manuſcript that lies expanſed, &c.] So is the deſcription of *Du Bartas 7. jour de la ſept.* *Sect.* 16. Pag. 8.

Oyes de Docteur muet eſt udie en ce livre
Qui nuict & jour ouvert t' apprendra de bien vivre.

All things are artificial, for Nature is the Art of God.] So Mr. *Hobbes* in his *Leviathan* (*in initio*) Nature is the Art whereby God governs the world.

Directing the operations of ſingle and individual Eſſences, &c.] things ſingular or individuals, are in the opinion of Philoſophers not to be known, but by the way of ſenſe, or by that which knows by its Eſſence, and that is only God. The Devils have no ſuch knowledg, becauſe whatſoever knows ſo, is either the cauſe or effect of the thing known; whereupon *Averroes* concluded that God was the cauſe of all things, becauſe he underſtands all things by his Eſſence; and *Albertus Magnus* concluded that the inferior Intelligence underſtands the ſuperior, becauſe it is an effect of the ſuperior: but neither of theſe can be ſaid of the Devil; for it appears he is not the effect of any of theſe inferior things, much leſs is he the cauſe; for the power of Creation only belongs to God. *Sect.* 17. Pag. 9.

All cannot be happy at once, because the glory of one State depends upon the ruin of another.] This Theme is ingeniously handled by Mr. *Montaign livr.* 1. *des Ess.* cap. 22. The Title whereof is, *Le profit de l' un est dommage de l' autre.*

Sect. 18. Pag. 10. *'Tis the common fate of men of singular gifts of mind, to be destitute of those of Fortune.*] So *Petron. Arbiter. Amor ingenii neminem unquam divitem fecit,* in *Satyric.* And *Apuleius* in Apog. *Idem mihi etiam* (saith he) *paupertatem opprobravit acceptum Philosopho crimen & ultro profitendum*; and then a little afterwards he sheweth that it was the common fate of those that had singular gifts of mind: *Eadem enim est paupertas apud Græcos in Aristide justa, in Phocione benigna, in Epaminonda strenua, in Socrate sapiens, in Homero diserta.*

We need not labour with so many arguments to confute Judicial Astrology.] There is nothing in Judicial *Astrology* that may render it impious; but the exception against it is, that it is vain and fallible; of which any man will be convinced, that has read *Tully de Divinat,* and St. *Aug. Lib.* 5. *de Civ. Dei.*

Sect. 19. Pag. 11. *There is in our soul a kind of Triumvirate——— that distracts the peace of our Commonwealth, not less than did that other the State of* Rome.] There were two *Triumvirates,* by which the peace of *Rome* was distracted; that of *Crassus, Cæsar* and *Pompey,* of which *Lucan,* l. 1.

— Tu causam aliorum———
Facta tribus Dominis communis Roma, nec unquam
In turbam missi feralia fœdera Regni.

and that other of *Augustus, Antonius,* and *Lepidus,* by whom, saith *Florus, Respub. convulsa est lacerataq;* which comes somewhat near the Authors words, and therefore I take it that he means this last Triumvirate.

Would dissuade my belief from the miracle of the Brazen Serpent.] Vid. *Coquenum in l.* 10. *Aug. de Civ. Dei, c.* 8.

And bid me mistrust a miracle in Elias, *&c.*] The History is 1 *Reg.* 18. It should be *Elijah.* The Author in 15. *Cap. Lib.* 7. *Pseudodox.* sheweth it was not performed naturally; he was (as he saith) a perfect miracle.

To think the combustion of Sodom *might be natural.*] Of that opinion was *Strabo,* whereupon he is reprehended by *Genebrard* in these words: *Strabo falsus est——— dum eversionem addicit sulphuri & bitumini è terra erumpentibus, quæ erat assignanda Cœlo,* i. e. *Deo irato. Tacitus* reports it according to the Bible, *fulminis ictu arsisse.*

Sect. 20. Pag. 11. *Those that held Religion was the difference of man from Beasts,* &c.] *Lactantius* was one of those: *Religioni ergo serviendum est, quam qui non suspicit, ipse se p osternit in terram, & vitam pecudum secutus, humanitate se abdicat.* Lactant. *de falsi. Sapientia,* cap. 10.

That Doctrine of Epicurus *that denied the Providence of God, was no Atheism, but,* &c.] I doubt not but he means that delivered in his Epistle to *Menœceus,* and recorded by *Diogenes Laërtius,* Lib. 10. *Quod beatum æternúmq; est, id nec habet ipsum negotii quicquam, nec exhibet alteri; itaque neque irâ, neque gratiâ tenetur, quòd quæ talia sunt imbecillia sunt omnia*; which the *Epicurean* Poet hath delivered almost in the same words.

Omnis enim per se divum natura necesse'st
Immortali ævo summa cum pace fruatur,
Semota à nostris rebus sejunctaq; longe:
Nam privata dolore omni, privata periclis
Ipsa suis pollens opibus nihil indiga nostri
Nec bene promeritis capitur, nec tangitur irâ. Lucret. *Lib.* 2.

That Villain and Secretary of Hell, that composed that miscreant piece of the three Impostors.] It was *Ochinus* that composed this piece; but there was no less a man than the Emperour *Frederick* the Second, that was as lavish of his tongue as the other of his Pen; *Cui sape in ore, Tres fuisse insignes Impostores, qui genus humanum seduxerunt: Moysem, Christum, Mahumetem. Lips.* monit.

monit. & exempl. Politic. cap. 4. And a greater than he, Pope *Leo* the Tenth, was as little favourable to our Saviour, when he us'd that speech which is reported of him, *Quantas nobis divitias comparavit ista de Christo fabula.*

There are in Scripture Stories that do exceed the Fables of Poets.] So the Author of *Relig. Laici. Certè mira admodum in S. S. plus quam in reliquis omnibus Historiis traduntur*; (and then he concludes with the Author) *Sed quæ non retundunt intellectum; sed exercent.* *Sect.* 21. Page 12.

Yet raise no question who shall rise with that Rib at the Resurrection.] The Author, *cap.* 2. *l.* 7. *Pseudodox.* sheweth that it appears in Anatomy, that the Ribs of Man and Woman are equal.

Whether the World were created in Autumn, Summer, or the Spring, &c.] In this matter there is a consent between two learned Poets; *Lucretius* and *Virgil*, that it begins in *Spring.*

At novitas mundi nec frigora dura ciebat;
Nec nimios æstus, nec magnis viribus auras. Lucret.

Which he would have to be understood of *Autumn*, because that resembles old age rather than infancy. He speaks expresly of the fowls.

Principio genus alitum variæque volucres
Ova relinquebant exclusa tempore verno. Lucret.

Then for *Virgil.*

Non alios primâ nascentis origine mundi
Illuxisse dies aliúmve habuisse tenorem
Crediderim, ver illud erat, ver magnus agebat
Orbis, & Hibernis parcebant flatibus Euri.
Virgil. 2. Georgic.

But there is a great difference about it betwixt Church-Doctors; some agreeing with these Poets, and others affirming the time to be in Autumn: but truly, in strict speaking, it was not created in any one, but all of the Seasons, as the Author saith here, and hath shewed at large, *Pseudodox. Epidemic.* l. 6. c. 2.

'Tis ridiculous to put off or drown the general Flood of Noah *in that particular Inundation of* Deucalion.] as the Heathens some of them sometimes did: *Confuderunt igitur sæpe Ethnici particularia illa diluvia, quæ longè pòst secuta sunt, cum illo universali quod præcessit, ut ex fabulis in Diluvio Deucalioneo sparsis colligere licet; non tamen semper nec ubique. Author Observat. in Mytholog. Nat. Com.* Then amongst those that confound them, he reckons *Ovid* and *Plutarch.* *Sect.* 22. Page 12.

How all the kinds of Creatures, not only in their own bulks, but with a competency of food and sustenance, might be preserved in one Ark, and within the extent of 300. *Cubits, to a reason that rightly examines it will appear very feasible.*] Yet *Apelles* the Disciple of *Mercion*, took upon him to deride the History of *Moses* in this particular, alledging that it must needs be a Fable, for that it was impossible so many creatures should be contain'd in so small a space. *Origen* and St. *Aug.* to answer this pretended difficulty, alledge that *Moses* in this place speaks of Geometrical (and not vulgar) cubits, of which every one was as much as six vulgar ones, and so no difficulty. But *Perer. l.* 10. *com. in Genes. quæst.* 5. *de arca*, rejects this opinion of *Origen*, as being both against Reason and Scripture.

1. Because that sort of Cubit was never in use amongst any people, and therefore absurd to think *Moses* should intend it in this place.

2. If *Moses* should not speak of the same Cubits here, that he mentions in other places, there would be great equivocation in Scripture: now in another place, *i. e. Exod.* 27. he saith, God commanded him to make an Altar three Cubits high; which if it shall be meant of Geometrical Cubits, it will contain 18. vulgar Cubits; which would not render it useless, but

would

would be contrary to the command which he saith God gave him, *Exod.* 20. *Thou shalt not go up by steps to my Altar.* For without steps what man could reach it; It must therefore be meant of ordinary Cubits; but that being so, it was very feasible, I can more easily believe than understand it.

And put the honest Father to the Refuge of a Miracle.] This honest Father was St. *Aug.* who delivers his opinion, that it might be miraculously done, *Lib.* 16. *de Civ. Dei, Cap.* 7. where having proposed the question how it might be done, he answers, *Quòd si homines eas captas secum adduxerunt, & eo modo ubi habitabant earum genera instituerunt, venandi studio fieri potuisse incredibile non est, quamvis jussu Dei sive permissu etiam operâ Angelorum negandum non sit potuisse transferri*; but St. *Augustine* saith not that it could not be done without a miracle.

And 1500 *years to people the World, as full a time* &c.]

That Methusalem *was the longest liv'd of all the children of* Adam, *&c.*] See both these Points cleared by the Author, in *Pseudodox. Epidemic.* the first, *lib.* 6. *cap.* 6. the other, *lib.* 7. *cap.* 3.

That Judas *perished by hanging himself, there is no certainty in Scripture, though in one place it seems to affirm it, and by a doubtful word hath given occasion to translate it; yet in another place, in a more punctual Description, it makes it improbable, and seems to overthrow it.*] These two places that seem to contradict one another, are *Matth.* 27. 5. and *Act.* 1. 8. The doubtful word he speaks of is in the place of *Matthew*; it is ἀπήγξατο, which signifieth suffocation as well as hanging, (ἀπελθὼν ἀπήγξατο, which may signifie literally, after he went out he was choak'd) but *Erasmus* translates it, *abiens laqueo se suspendit:* The words in the *Acts* are, *When he had thrown down himself headlong, he burst in the midst, and all his Bowels gushed out*; which seems to differ much from the expression of *Matthew*; yet the ancient Writers and Fathers of the Church do unanimously agree that he was hanged. Some I shall cite. *Anastas. Sinaita, l.* 7. *Anagog. Contempl. Unus latro ingratus cùm esset typus Diaboli, & Serpentis, & Judæ, qui se in ligno suffocavit.* Gaudentius Brixiens. *Tract.* 13, *de Natal. Dom. Mortem debitam laqueo sibimet intulit præparato,* &c. Drogottshen. *de Sacram. dominic. pass. Jamdiu erat quidem quod Christo recesserat, & avaritiæ laqueo se suspenderat; sed quod fecerat in occulto, palàm omnibus innotuit.* S. Martialis *in Ep. ad Tholosanos. Non sustinuit pœnitentiam, donec laqueo mortis seipsum consumpsit* Ignat. *ad Philippens. Diabolus laqueum ei ostendit, & suspendium docuit,* Leo *Serm.* 3. *de passion.* —— *Ut quia facinus omnem mensuram ultionis excesserat, te haberet impietas tua judicem, te pateretur sua pœna Carnificem.* Theodoret. *lib.* 1. *hæretic. fabul. Ille protinus strangulatus est, quæ fuit merces ejus proditionis.* Chrysostom. *Hom.* 3. *de proditore. Pependit cœlum terramque inter medius vago funere suffocatus, & cum flagitio suo tumefacta viscera crepuerunt,* &c. Bernard. *Serm.* 8. *in Psal.* 9. *Judas in Aere crepuit medius.*

There are those that are so particular, that they acquaint us with the manner, as *that it was done with a Cord.* Antiochus Laurensis, *Spem omnem à se cùm abjecisset, insiliente in eum inimico (sc. Diabolo) funiculo sibi præfocavit gulam.* Oecumen. *in Act. Fracto funiculo quo erat suffocatus decidit in terram præcipitio.* 2. *That it was done on a* Fig-Tree, *Beda. Portam David egredientibus fons occurrit in Austrum per vallem directus, ad cujus meridiatem ab occasu Judas se suspendisse narratur: Nam & ficus magna ibi & vetustissima stat.* Juven. *lib.* 4. *Hist. Evangelic.*

Exorsúsq; suas laqueo sibi sumere pœnas,
Informem rapuit ficus de vertice mortem.

3. Some acquaint us with the time when it was done, *viz. the next day after he had given the kiss.* So Chrysostom. *Homil.* 1. *de proditor. & Mysterio Cœn. Dominic. Guttur prophanum quod hodie Christo extendis ad osculum, crastino es illud extensurus ad laqueum.* But there are two, that is, *Euthymius* and *Oecumenius*, that tell us, *that the hanging did not kill him*, but that either the Rope broke, or that he was cut down, and afterward cast himself down headlong,

headlong, as it is related in the before-mentioned place of the *Acts*: *Agritus à quibusdam depositus est ne præfocaretur, deniq; postquam in secreto quodam loco modico vixisset tempore præceps factus sive præcipitatus, inflatus, diruptus, ac diffisus est medius, & effusa sunt omnia viscera ejus*: *ut in* Actis. *Euthym.* cap. 67. *in Matth. Judas suspendio è vita non decessit, sed supervixit, dejectus est enim prinsquam præfocaretur, idq; Apostolorum Acta indicant, quod prónus crepuit medius.* Oecumen. in Act. And this may serve to reconcile these two seemingly disagreeing Scriptures.

That our Fathers after the Flood erected the Tower of Babel.] For this see what the Author saith in his *Pseudodox. Epidemic.* l. 7. c. 6.

And cannot but commend the judgment of Ptolomy.] He means of *Ptolomeus Philadelphus*, who founded the Library of *Alexandria*, which he speaks of in the next Section. He was King of *Egypt*: and having built and furnished that Library with all the choicest Books he could get from any part of the world, and having good correspondence with *Eleazar* the High Priest of the *Jews*, by reason that he had released the *Jews* from Captivity, who were taken by his Predecessor *Ptolomæus Lagi*; he did by the advice of *Demetrius Phalereus* the *Athenian*, whom he had made his Library-Keeper, write to *Eleazar*, desiring him, that he would cause the Books of the *Jews*, which contained their Laws, to be translated for him into *Greek*, that he might have them to put into his Library: To which the Priest consents; and for the Kings better satisfaction, sends to him Copies of the Books, and with the same, LXXII Interpreters skilled both in the *Greek* and *Hebrew* Language, to translate them for him into *Greek*; which afterwards they performed. This is for certain: but whether they translated only the *Pentateuch*, as St. *Jerome* would have it, or together with them the Books of the Prophets also, as *Leo de Castro* and *Baronius* contend, I undertake not to determine: but as to that part of the story, that these Interpreters were put into so many several Cells, whilst they were about the work of translation: and notwithstanding they were thus severed, that they all translated it *totidem verbis*: it is but reason to think with St. *Jerome* (notwithstanding the great current of Authority against him) that it is no better than a Fable. *Sect.* 23. Pag. 131

The Alcoran of the Turks (I speak without prejudice) is an ill composed piece, containing in it vain and ridiculous errors in Philosophy, &c.] It is now in every mans hand, having been lately translated into *English*; I shall therefore observe but these few particulars in it, in regard the Book it self is so common: and indeed they are not mine own, but *Lipsius* his Observations. He begins, *O nugas, O deliria! primùm* (saith he) *commentus est, Deum unum solidúmque: (ὁλόφυες, Græci exprimunt) eundémq; incorporeum esse. Christum non Deum, sed magnum vatem & prophetam: se tamen majorem, & proximè à Deo missum: præmia qui ipsum audient Paradisum, qui post aliquot annorum millia referabitur, ibi quatuor flumina lacte, vino, melle, aqua fluere, ibi palatia & ædificia gemmata atq; aurata esse, carnes avium suavissimarum, fructus omne genus, quos sparsi jacentésq; sub umbra arborum edent: sed caput fœlicitatis, viros fœminasq; majores solito magnis Genitalibus assiduâ libidine, & ejus usu sine tædio aut fatigatione.* These and some others that are in the Alcoran he reckons up. *Sed & Physica quoque miranda* (saith he) *nam facit Solem & Lunam in equis vehi, illum autem in aquam calidam vespere mergi, & bene lotum ascendere atque oriri, Stellas in aere è catenis aureis pendere, terram in bovini cornu cuspide stabilitum, & agitante se bove ac succutiente fieri terræ motum, hominem autem ex hirundine aut sanguisuga nasci*, &c. Just. Lips. *Monit. & exempl. politic.* cap. 3.

I believe besides Zoroaster *there were divers others that wrote before Moses.*] *Zoroaster* was long before *Moses*, and of great name: he was the Father of *Ninus*, *Justin. lib.* 1. *Si quamlibet modicum emolumentum probaveritis, ego ille sim Carinondas vel Damigeron, vel is Moses, vel Joannes, vel Apollonius, vel ipse Dardanus, vel quicunq; alius* post Zoroastrem *& Hostanem, inter Magos celebratus est.* Apuleius in Apol.

Others with as many groans deplore the combustion of the Library at Alexandria.] This was that Library before spoken of, set up by *Ptolomæus Philadelphus*; in which 'tis reported by *Ammianus Marcellinus* there were 700000 Volumes; *Sect.* 24. Page 14.

lumes; it was burnt by *Julius Cæsar*'s means, whose Navy being environ'd before *Alexandria*, he had no means to keep off the enemy, but by flinging of fire, which at length caught the Library and consumed it, as *Plutarch* hath it in *Vita Cæsaris:* but notwithstanding we have no reason to believe it was quite consumed, because *Sueton.* in *Claudius*, tells us, that that Emperour added another to it; and there must be somewhat before, if it were an addition; but true it is, too many of the Books perished: to repair which loss, care was taken by *Domitian* the Emperour, as the same *Sueton.* and *Aurel. Victor.* do relate.

I would not omit a Copy of Enoch's *Pillars, had they many nearer Authors than* Josephus, *&c.*] For this the Story is, that *Enoch*, or his Father *Seth*, having been inform'd by *Adam*, that the World was to perish once by Water, and a second time by Fire, did cause two Pillars to be erected, the one of Stone against the Water, and another of Brick against the Fire; and that upon those Pillars was engraven all such Learning as had been delivered to, or invented by Mankind; and that thence it came that all Knowledge and Learning was not lost by means of the Flood, by reason that one of the Pillars (though the other perished) did remain after the Flood; and *Josephus* witnesseth, till his time, *lib.* 1. *Antiq. Judaic.* cap. 3.

Of those three great Inventions of Germany, *there are two which are not without their Incommodities.* Those two he means are *Printing* and *Gunpowder*, which are commonly taken to be *German* Inventions; but Artillery was in *China* above 1500 years since, and Printing long before it was in *Germany*, if we may believe *Juan Coneales Mendoza* in his *History* of *China*, *lib.* 3. *cap.* 15, 16. The incommodities of these two Inventions, are well described by *Sam. Daniel*, lib. 6. of the Civil Wars.

Fierce Nemesis, *Mother of Fate and Chance,*
Sword-bearer of th' Eternal Providence,
Turns her stern look at last into the West,
As griev'd to see on earth such happy rest;

And for Pandora *calleth presently,*
Pandora Jove's *fair gift, that first deceived*
Poor Epimetheus *in his imbecillity,*
That thought he had a wondrous boon received,
By means whereof curious mortality
Was of all former quiet quite bereaved.
To whom being come deckt with all qualities,
The wrathful Goddess breaks out in this wise:

Dost thou not see in what secure estate,
Those flourishing fair Western Parts remain?
As if they had made Covenant with Fate,
To be exempted, free from others pain,
At one with their desires, friends with debate,
In peace with pride, content with their own gain.
Their bounds contain their minds, their minds applyed
To have their bonds with plenty beautified.

Devotion (Mother of Obedience)
Bears such a hand on their credulity,
That it abates the spirit of eminence,
And busies them with humble piety:
For see what works, what infinite expence,
What Monuments of zeal they edifie,
As if they would, so that no stop were found,
Fill all with Temples, make all holy ground.

But we must cool this all-believing zeal,
That hath enjoy'd so fair a turn so long, &c.

Dislike

Dislike of this first by degrees shall steal,
As upon souls of men perswaded wrong;
And that the sacred power which thus hath wrought,
Shall give her self the Sword to cut her throat.

Go therefore thou with all thy stirring Train
Of swelling Sciences (the gifts of grief)
Go loose the links of that soul-binding Chain,
Enlarge this uninquisitive belief:
Call up mens Spirits, that simpleness retain,
Enter their hearts, and knowledge make the Thief
To open all the Doors to let in Light,
That all may all things see but what is right.

Opinion arm against opinion (grown)
Make new-born contradictions still arise,
As if Thebes *Founder* (Cadmus) *tongues had sown*
Instead of teeth, for greater mutinies:
Bring new defended faith against faith known,
Weary the soul with contrarieties,
Till all Religion become Retrograde,
And that fair tye the mask of sin be made:

And better to effect a speedy end,
Let there be found two fatal Instruments,
*The * one to publish, the other to defend* * Printing.
Impious contention, and proud discontents:
Make that instamped Characters may send
Abroad to thousands, thousand mens intents,
And in a moment may dispatch much more,
Than could a world of Pens perform before;

Whereby all quarrels, Titles, secrecies,
May unto all be presently made known,
Factions prepar'd, Parties allur'd to rise,
Seditions under fair pretences sown;
Whereby the vulgar may become so wise,
That with a self-presumption overgrown,
They may of deepest Mysteries debate,
Controul their betters, censure acts of State.

And then when this dispersed mischief shall
Have brought confusion in each mystery,
Call'd up contempts of State in general,
And ripen'd the humour of impiety,
Then take the † other Engine wherewithall † Guns.
They may torment their self wrought misery;
And scourge each other in so strange a wise,
As time or tyrants never could devise, &c.

See *Bellermontan* in his *Dissertat. Politic. dissert.* 29. and 30.

For the other Invention, the Latine Annotator doubts whether the Author means Church-Organs, or Clocks? I suppose he means Clocks, because I find that Invention reckon'd by a *German*, with the other two, as a remarkable one. It is by *Busbequius*, speaking of the Turks, who hath these words, *Testes majores minoresq; bombardæ, multáque alia quæ ex nostris excogitata ipsi ad se avertunt; ut libros tamen typis excuderent, horologia in publico haberent, nondum adduci potuerunt.* Epist. Legat. Turcic. I suppose if he had known

any Invention which next to the other two had been greater than this, he would not have named this, and this being the next conſiderable, we have no cauſe to doubt but the Author meant it.

To maintain the Trade and Myſtery of Typographers.] Of this *Cunæus* in his *Satyre Sardi vœnales. Qui bis in anno nomen ſuum ad Germanorum nundinas non tranſmittit, eruditionem ſuam in ordinem eò actam credit; itaq; nunquam tot fungi una pluvia naſcuntur, quot nunc libri uno die.*

Sect. 25. Page 14. *The* Turk *in the bulk that he now ſtands, is beyond all hope of converſion.*] That is, in reſpect of his great ſtrength, againſt which it is not probable the Chriſtians will prevail, as it is obſerved by *Monſieur de Silhon. La Race des Ottomans* (ſaith he) *qui oſte a Dieu la Religion qu'il a revelée, & aux hommes la liberté que le droit des Gens leur laiſſe, a fait tant de progres depuis trois cens & quelques annees, qu'il ſemble qu'elle n'ait plus rien a craindre de dehors, & que ſon empire ne puiſſe perir que par la corruption de dedans & par la diſſolution des parties qui compoſent un corps ſi vaſte. Mr. de Silhon en ſon Miniſt. D'Eſtat. lib.* 1. *cap.*

None can more juſtly boaſt of perſecutions, and glory in the number and valour of Martyrs.] Of the fortitude of the Chriſtians in this particular, *Minutius Fœlix*, in the perſon of the Ethnick, hath theſe words, *Permirâ ſtultitia & incredibili audaciâ ſpernunt tormenta præſentia, dum incerta metuunt & futura; & dum mori poſt mortem timent, interim mori non timent.* And afterwards, when he ſpeaks in the perſon of the Chriſtian, he ſaith, that Chriſtian women and children have in this ſurpaſſed *Scævola* and *Regulus: Viros* (ſaith he) *cum Mutio vel cum Atilio Regulo comparo: pueri & mulierculæ noſtræ Cruces & Tormenta, feras & omnes ſuppliciorum terriculas inſpiratâ patientiâ doloris illudunt.* Minut. *in* Octav. *vide Aug. de Civit. Dei, lib.* 1. *c.* 23, 24.

If we ſhall ſtrictly examine the circumſtances and requiſites which Ariſtotle *requires to true and perfect valour, we ſhall find the Name only in his Maſter* Alexander, (*that is, no more than the Name*) *and as little in that Roman worthy* Julius Cæſar.] *Ariſtot.* 3. *Ethic. cap.* 7. amongſt other requiſites, requires to valour, that it keep a mediocrity betwixt audacity and fear; that we thruſt not our ſelves into danger when we need not; that we ſpare not to ſhew our valour when occaſion requires: He requires for its proper object, Death; and to any death, he prefers death in War, becauſe thereby a man profits his Country and Friends; and that he calls *mors honeſta*, an honeſt or honourable death: and thereupon he defines a valiant man to be, *Is qui morte honeſtâ propoſitâ, iiſque omnibus quæ cùm ſint repentina mortem adferunt, metu vacat.* So that by the Authors ſaying, there was only the Name in *Alexander*, he means only that which is rendred in the two laſt words *metu vacans*, and not the reſt that goes to make up the definition of a valiant man, which is very truly affirmed of *Alexander*, who expoſed himſelf to hazard many times when there was no cauſe for it: As you may read in *Curtius*, he did, in the ſiege of *Tyrus*, and many other wayes. *Cettuy-cy ſemble recercher & courir a force les dangers comme un impetueux torrent, qui choque & attaque ſans diſcretion, & ſans chois tout ce qu'il rencontre,* ſaith *Montaign*, ſpeaking of *Alexander*, l. 2. *des Eſſ.* cap. 34. And for *Cæſar*, it cannot be denyed, but in his Wars he was many times (though not ſo generally as *Alexander*) more adventurous than reaſon military could warrant to him; and therefore *Lucan* gives him no better Character than

Acer & indomitus quò ſpes quòq; ira vocâſſet
Ferre manum, &c. Lucan. *lib.* 1.

To inſtance in ſome Particulars: With what an inconſiderable ſtrength did he enterprize the conqueſt of *Egypt*, and afterwards went to attaque the forces of *Scipio* and *Juba*, which were ten times more than his own? after the Battle of *Pharſalia*, having ſent his Army before into *Aſia*, and croſſing the *Helleſpont* with one ſingle Veſſel, he there meets *Lucius Caſſius* with ten men of War, he makes up to him, ſummons him to render, and he doth it. In the famous and furious ſiege of *Alexia*, where he had 80000 men

to

to make defence againſt him, and an Army of one hundred and nine thouſand Horſe, and two hundred and forty thouſand foot, all marching towards him, to raiſe his ſiege; yet for all that he would not quit the Siege, but firſt fought with thoſe without, and obtain'd a great Victory over them, and ſoon afterwards brought the beſieged to his mercy.

The Council of Conſtance *condemns* John Huſſe *for an Heretick, the Stories of his own Party ſtyle him a Martyr.*] *John Huſſe* did agree with the Papiſts againſt us in the Point of Invocation of Saints, Prayers and Sacrifice for the Dead, free Will, Good Works, confeſſion of Sins, ſeven Sacraments, *&c. Gordon. Huntl. contr.* 3. *de Sacr. Euch. cap.* 17. yet was he condemned for maintaining certain Articles ſaid by that Council to be heretical and ſeditious, and was burnt for Hereſie. Now as I will not ſay he was an Heretick, ſo can I not maintain that he was a Martyr, if it be but for this one Article, which in the 15. Seſſ. of that Council was objected againſt him, which he did acknowledge, but would not recall, *i. e. Nullus eſt Dominus Civilis, dum eſt in peccato mortali.* If that Doctrine ſhould be believed, we ſhall have little obedience to civil Magiſtrates; and without that, how miſerable is humane condition? That which begat compaſſion towards *Huſſe* in thoſe of his own Party was, that he had a ſafe-conduct from the Emperour *Sigiſmund*; and therefore it was, ſay they, a violation of publick faith in the *Council* and *Emperour* in putting him to death. *Sect.* 26. Pag. 151.

That wiſe heathen Socrates *that ſuffered on a fundamental Point of Religion, the Unity of God.*] That *Socrates* ſuffered on this Point, divers Chriſtian Writers do object to the Ethnicks, as *Juſtin Martyr*, Apol. 2. *Euſeb. l.* 5. *de præparat. Evangelic. c.* 14. *Tertul.* in *Apolog.* cap. 14. and *Lactant. de juſtitia*, cap. 15. whoſe words are theſe: *Plato quidem multa de uno Deo locutus eſt, à quo ait conſtitutum eſſe mundum, ſed nihil de Religione; ſomniaverat enim Deum, non cognoverat. Quòd ſi juſtitiæ defenſionem vel ipſe vel quilibet alius implere voluiſſet, imprimis Deorum Religiones evertere debuit, quia contrariæ pietati. Quod quidem* Socrates *quia facere tentavit, in carcerem conjectus eſt, ut jam tunc appareret quid eſſet futurum iis hominibus qui juſtitiam veram defendere, Deóque ſingulari ſervire cœpiſſent.*

I have often pitied the miſerable Biſhop that ſuffered in the cauſe of Antipodes.] The ſuffering was, that he loſt his Biſhoprick for denying the *Antipodes*. Vid. *Aventin. in Hiſt. Boio.* Beſides him, there were other Churchmen of great note, that denyed *Antipodes*, as *Lactantius*, *Auguſtin*, and *Bede*.

I hold that God can do all things: How he ſhould work Contradictions, I do not underſtand, yet dare not therefore deny.] Who would not think the Author had taken this from Mr. *Montaign*, whoſe words are, *Il m' a toujours ſemblé qu'a un homme Chriſtien, cette ſorte de parler eſt pleine d' indiſcretion & d' irreverence* [*Dieu ne ſe peut déſdire,*] [*Dieu ne peut faire cecy ou cela*] *je ne trouve pas bon d'enfermer ainſi la puiſſance divine ſous les loix de noſtre parole. Et l'apparence qui s' offre à nous en ſes propoſitions, il la faudroit repreſenter plus reverement, & plus Religieuſement.* Liv. 2. des Eſſ. c. 12. *Sect.* 27. Pag. 15.

I cannot ſee why the Angel of God ſhould queſtion Eſdras *to recall the time paſt, if it were beyond his own power; or that God ſhould poſe mortality in that which he was not able to perform himſelf.*] Sir *K. Digby* in his Notes upon this place ſaith, there is no contradiction in this, becauſe he ſaith it was but putting all things that had motion into the ſame ſtate they were in at that moment, unto which time was to be reduced back, and from thence letting it travail on again by the ſame motions, *&c.* which God could do. But under favour, the contradiction remains, if this were done that he mentions; for Time depends not at all upon motion, but has a being altogether independent of it, and therefore the ſame revolution would not bring back the ſame time, for that was efflux'd before; as in the time of *Joſhua*, when the Sun ſtood ſtill, we cannot but conceive, though there were no motion of the Sun, but that there was an efflux of Time, otherwiſe, how could the Text have it, *That there was not any day, before or after, that was ſo long as that?* for the length of it muſt be underſtood in reſpect of the flux of time.

The reaſoning of Sir *Kenelme* is founded upon the opinion of *Ariſtot.* who will needs have it, that Time cannot be without mutation; he gives this for a reaſon, becauſe when we have ſlept, and cannot perceive any mutation to have been, we do therefore uſe to connect the time of our ſleeping and of our awaking together, and make but one of it: to which it may be anſwered, although ſome mutation be neceſſary, that we may mark the flux of time, it doth not therefore follow that the mutation is neceſſary to the flux it ſelf

Sect. 28. Page 16. *I excuſe not* Conſtantine *from a fall off his Horſe, or a miſchief from his enemies, upon the wearing thoſe nails,* &c.] *Hac de re videatur P. Diac. hiſt. miſcell.*

Sect. 29. Page 16. *I wonder how the curioſity of wiſer heads could paſs that great and indiſputable miracle, the ceſſation of Oracles.*] There are three opinions touching the manner how the predictions of theſe Oracles were performed: Some ſay by vapour, ſome by the intelligences, or influences of the Heavens, and others ſay by the aſſiſtance of the Devils. Now the indiſputable miracle the Author ſpeaks of, is, that they ceas'd upon the coming of Chriſt; and it is generally ſo believed; and the Oracle of *Delphos* delivered to *Auguſtus*, mentioned by the Author in this Section, is brought to prove it, which is this:

Me puer Hebræus divos Deus ipſe gubernans
Cedere ſede jubet, triſtemq; redire ſub orcum.
Aris ergo dehinc tacitus diſcedito noſtris.

But yet it is ſo far from being true that their ceſſation was miraculous, that the truth is, there never were any predictions given by thoſe Oracles at all.

That their ceſſation was not upon the coming of Chriſt, we have luculent teſtimony out of *Tully*, in his 2. *lib. de Divinat.* which he writ many years before Chriſt was born; who tells us that they were ſilent (and in deed he never thought they were otherwiſe) long before that time, inſomuch that they were come into contempt: *Cur iſto modo jam oracula Delphis non eduntur, non modo noſtra ætate, ſed jamdiu jam ut nihil poſſit eſſe contemptius?* So that for that of *Delphos*, which was the moſt famous of them all, we ſee we have no reaſon to impute the ceſſation of it to Chriſt; Why therefore ſhould we do ſo for any of the reſt?

2. For their predictions, let us conſider the three ſeveral ways before mentioned, whereby they are ſuppoſed to operate; and from thence ſee whether it be probable that any ſuch Oracles ever were.

The firſt Opinion is, that it was by exhalation or vapour drawn up from the earth; and gives this for a reaſon of their being, that they were for a time nouriſhed by thoſe exhalations; and when thoſe ceaſed, and were exhauſted, the Oracles famiſh'd and dyed for want of their accuſtom'd ſuſtenance: this is the far-fetcht reaſon given by *Plutarch* for their defect; but 'twas not deviſed by him, but long before, as appears, in that *Tully* ſcoffs at it, *lib de divinat. De vino aut ſalſamento putes loqui* (ſaith he) *quæ evaneſcunt vetuſtate.* This ſeem'd abſurd to others, who do therefore ſay this was not to be attributed to any power of the Earth, but to the power of the Heavens, or *Intelligences Cœleſtial*; to certain Aſpects whereof, they ſay, the *Statua's* of thoſe Oracles were ſo adapted, that they might divine and foretel future events. But yet to others, this way ſeemeth as abſurd as the other; for, ſay they, admitting that there were an efficacy in the Heavens, more than in the Earth; yet how can it be that men ſhould come by the skill to fit the *Statua's* to the Aſpects or influences of the Heavens? or if at any time they had ſuch skill, why ſhould not the ſame continue the rather, becauſe men are more skilled in the motions of the Heavens, of later than in the former time? Again, they do not ſee how it ſhould be that the cauſe ſhould be of leſs excellency than the effect; for if a man (ſay they) can by his induſtry make ſuch Oracles, why can he not produce the ſame effect in another man? For if you affirm that the Heavens influence is requiſite, they will tell you that influence may happen as well to a man, as to a *Statua* of wood or ſtone. Therefore the third ſort being unſatisfied with either of the

the former ways, conclude, that this was perform'd by the Devil; but that will appear as contrary to Reaſon and Philoſophy, as either of the former; for Philoſophy teacheth that things ſingular, or individual, are to be known only by ſenſe, or by ſuch an Intellect, as doth know by its Eſſence; and Theology teacheth that God only knoweth the heart, and that the Devil doth not know by ſenſe, nor by eſſence; and ſince 'tis admitted by all, that moſt of the anſwers that were pretended to be given by thoſe Oracles, were *de rebus ſingularibus*, or *individuis*; it is evident that theſe predictions were not perform'd by Devils. How then? why thoſe predictions which the ignorant Heathen took to come from Heaven, and ſome Chriſtians (not leſs ignorant) from the Devil, was nothing but the jugling and impoſtures of the Prieſts, who from within the *Statua*'s gave the anſwers which Princes connived at, that they might upon occaſion ſerve their turns upon the ignorance of the people; and the learned men, for fear of their Princes, durſt not ſpeak againſt it. *Lucian* hath noted it, and ſo a more authentick Author, *Minut. Felix* in *Octav. Authoritatem quaſi præſentis numinis conſequuntur, dum inſpirantur interim vatibus.* But in proceſs of time, the people grew leſs credulous of their Prieſts, and ſo the Oracles became to be ſilent: *Cum jam* (ſaith he) *Apollo verſus facere deſiſſet, cujus tunc cautum illud & ambiguum defecit oraculum: Cum & politiores homines & minus creduli eſſe cœperunt.* Sir *H. Blount* in his *Levantine* Voyage ſaith, he ſaw the *Statua* of *Memnon* ſo famous of old; he ſaith it was hollow at top, and that he was told by the *Egyptians* and Jews there with him, that they had ſeen ſome enter there, and come out at the Pyramid, two Bows-ſhoot off; then (ſaith he) I ſoon believ'd the Oracle, and believe all the reſt to have been ſuch; which indeed, is much eaſier to imagine, than that it was perform'd by any of the three wayes before-mentioned. St. *Aug.* hath compoſed Book, where he handleth this point at large, and concludeth that the Devils can no more foretel things to come, than they are able to diſcern the thoughts that are within us. *Aug. lib. de Scientia Dæmon.*

Till I laughed my ſelf out of it with a piece of Juſtin, *where he delivers that the Children of* Iſrael *for being ſcabbed were baniſhed out of* Egypt.] Theſe words of *Juſtin* are, *Sed cum ſcabiem Ægyptii & pruriginem paterentur, reſponſo moniti, eum* (*ſc. Moyſen*) *cum agris, ne peſtis ad plures ſerperet, terminis Ægypti pellunt. l.* 36. But he is not ſingular in this, for *Tacitus* tells us, *Hiſt. lib.* 5. *Plurimi authores conſentiunt orta per Ægyptum tabe quæ corpora fœdaret, Regem* (*Ochorim*) (he means *Pharaoh*) *adito Hammonis oraculo remedium petentem purgare Regnum & id genus hominum——alias in terras avertere juſſum.* Et paulo inferius, *Quod ipſos ſcabies quondam turpaverat.*

I have ever believed, and do now know that there are Witches.] What ſort of Witches they were that the Author knew to be ſuch, I cannot tell; for thoſe which he mentions in the next Section, which proceed upon the principles of Nature, none have denyed that ſuch there are; againſt ſuch it was, that the *Lex Julia de veneficiis* was made, that is, thoſe, *Qui noxio poculo aut impuris medicaminibus aliquem fuerint infectati. Al. ab Alex. Gen. Dier. l.* 5. c. 1. But for the opinion that there are Witches which co-operate with the Devil, there are Divines of great note, and far from any ſuſpition of being irreligious, that do oppoſe it. Certainly there is no ground to maintain their being from the ſtory of Oracles, as may be ſeen from what hath been ſaid on the precedent Section. *Sect.* 30. Page 16.

Nor have the power to be ſo much as Witches.] *Pliny* ſaith, ſo it fared with *Nero*, who was ſo hot in purſuit of the Magick Arts, that he did dedicate himſelf wholly to it, and yet could never ſatisfie himſelf in that kind, though he got all the cunning men he could from the Eaſt, for that purpoſe *Plin. l.* 3. *Nat. Hiſt. c.* 1.

By conjunction with the Devil.] Though, as the Author ſaith, it be without a Poſſibility of Generation, yet there are great men that hold, that ſuch carnality is performed; as *Auguſt. in Levit. Aquin. l.* 2. *de qu.* 73. *art. ad* 2. and *Juſtin Martyr. Apol.* 1.

It

Sect. 33. Pag. 18. *It is no new opinion of the Church of* Rome, *but an old one of* Pythagoras *and* Plato.] This appears by *Apuleius* a Platonist, in his Book *de Deo Socratis*, and elsewhere. See *Mede's Apostasie of the latter times*, where out of this and other Authors, you shall see collected all the learning *de Geniis*.

I cannot with those in that great Father securely interpret the work of the first day, Fiat lux, *to the creation of Angels.*] This great Father is S. *Chrysost. Homil. in Genes.* But yet 'tis his opinion, as also of *Athanasius* and *Theodoret* that there is expres mention of the creation of Angels, so that they need not rest upon this place, which they admit to be somewhat obscure. The place which they take to be expres is that of the 104 *Psalm*, where *David* begins to speak of the Majesty of God, in this manner: *Confessionem sive majestatem & decorem induisti, amictus lumine sicut vestimento:* Next he speaks of the Heavens, saying, *Thou hast stretched them out over us like a Tent.* Then he speaks of the Angels, *Qui facis Angelos tuos spiritus.* Now if it shall be objected, that this expression is only of the time present, and without relation to the Creation: Answer is given by Divines, that the *Hebrews* have but three Tenses in their Verbs, the Preterperfect, Present, and Future Tense; and have not the use of the Preterimperfect, and Preterpluperfect, as the *Greeks* and *Latines* have; whence it ariseth, that the Present Tense with the *Hebrews*, may, as the sentence will bear it, be translated by the Preterimperfect, as also the Preterperfect by the Preterpluperfect Tense; and this (they say) is practised in this very passage, where the Phrase, as it is in Hebrew, may be rendred as well *qui faciebas*, as *qui facis Angelos*, &c. Vid. *Hieronym. in Ep. ad Titum, & Thom. Aqu. 1. p. qu.* 61. *art.* 3. The Latine Annotator saith, the Father meant by the Author, is St. *Aug.* and quotes him, *l.* 11. *de Civ. Dei*, cap. 9. which place I have perused, and find the expression there used by St. *Aug.* is but hypothetical; for these are his words: *Cum enim dixit, Fiat lux, & facta est lux, si recte in hac luce creatio intelligitur Angelorum*, &c. Where you see 'tis but with a *Si*, and therefore I conceive the Author intends not him, but *Chrysostom.*

Where it subsists alone, 'tis a Spiritual Substance, and may be an Angel.] *Epicurus* was of this opinion, and St. *Aug in Enchirid. ad Laurentium.*

Sect. 35. Pag. 19. Moses *decided that Question, and all is salved with the new term of a Creation.*] That is it which *Aristotle* could not understand; he had learned that *ex nihilo nihil fit*, and therefore when he found those that disputed that the World had a beginning, did maintain that it was generated, and he could not understand any generation, but out of matter præexistent *in infinitum*, therefore he took their opinion to be, absurd, and upon that ground principally, concluded the World to be eternal: whereas, if he had understood that there may be such a thing as Creation he had not done it, for that solves his *Processus in infinitum.* Take from *Plato*, that the World had a beginning, and from *Arist.* that it was not generated, and you have the (true) Christian opinion.

Sect. 36. Pag. 20. *In our study of Anatomy, there is a mass of mysterious Philosophy, and such as reduced the very Heathens to Divinity.*] So it did *Galen*, who considering the order, use and disposition of the parts of the body, brake forth into these words: *Compono hic profecto Canticum in Creatoris nostri laudem, quod ultra res suas ornare voluit melius quam ulla arte possent.* Galen. 3. *de usu partium.*

Sect. 37. Pag. 20. *I cannot believe the wisdom of* Pythagoras *did ever positively, and in a literal sense, affirm his* Metempsychosis.] In this the opinion of *Grotius* is contrary to the Author, who saith this opinion was begotten by occasion of the opinion of other Philosophers, who in their discourses of the life that is to be after this, brought such arguments, *Quæ non magis de homine quam de bestiis procedunt.* And therefore, saith he, *mirandum non est, si transitum animarum de hominibus in bestias, de bestiis in homines alii commenti sunt. Lib.* 2. *de ver. Relig. Christ.* (*vide etiam Annotat. ejusd.*) But yet there is a shrewd objection against the opinion of *Pythagoras*, if he did mean it literally which is cast in by the Sectators of *Democritus* and *Epicurus*, which *Lucretius* remembers in these Verses:

Præterea

Præterea si immortalis natura animæ
Constat, & in corpus nascentibus insinuatur,
Cur super ante actam ætatem meminisse nequimus?
Nec vestigia gestarum rerum ulla tenemus?
Nam si tantoper est animi mutata potestas,
Omnis ut actarum excideret retinentia rerum,
Non ut opinor ea ab leto jam longiter errat.

This Argument, 'tis true, is *pro falso contra falsum*, but yet holds *ad hominem* so far, that it is not likely (as the Author saith) but *Pythagoras* would observe an absurdity in the consequence of his Metempsychosis; and therefore did not mean it literally, but desired only to express the Soul to be immortal, which he, and the other Philosophers that were of that opinion, who had not heard of Creation, could not conceive, unless it must be taken for truth, that the soul were before the body; so saith *Lactantius* of them. *Non putavit aut aliter fieri posse ut supersint animæ post corpora, nisi videntur fuisse ante corpora. De falsa Sap. c.* 18.

I do not envy the temper of Crows or Daws.] As *Theophrastus* did, who dying, accused Nature for giving them, to whom it could not be of any concernment, so large a life; and to man, whom it much concern'd, so short a one. *Cic. Tusc. quæst. l.* 3. *Sect.* 41. Page 22.

Not upon Cicero's *ground, because I have liv'd them well.*] I suppose he alludes to an expression in an Epistle of *Cicero*, written in his Exile, to his Wife and Children, where he hath these words to his Wife: *Quod reliquum est, te sustenta, mea Terentia, ut potes, honestissime viximus, floruimus. Non vitium nostrum sed virtus nos afflixit, peccatum est nullum nisi quòd non unà animum cum ornamentis amisimus*, l. 24. Ep. 4. *Sect.* 42. Page 23.

And stand in need of Æson's *Bath before threescore.*] *Æson* was the Father of *Jason*, and at his request, was by *Medea*, by the means of this Bath, restored to his youth. Ingredients that went into it, and the description of *Medea*'s performance, *Ovid* gives you, *l.* 7. *Metam.*

Interea calido positum medicamen aheno
Fervet & exultat, spumisq; tumentibus albet.
Illic Æmoniâ radices valle resectas,
Seminaq; & flores, & succos incoquit atros.
Adjicit extremo lapides Oriente petitos,
Et quas Oceani refluum mare lavit arenas.
Addidit exceptas lunæ de nocte pruinas,
Et Strigis infames ipsis cum carnibus alas,
Inq; virum soliti vultus mutare ferinos,
Ambigui prosecta lupi: nec defuit illi
Squamea Cinyphei tenuis membrana Chelydri,
Vivaciq; jecur cervi; quibus insuper addit
Ora, caputq; novem cornicis secula passæ.
His & mille aliis, postquam sine nomine rebus
Propositum instruxit mortali barbara munus;
Arenti ramo jampridem mitis olivæ
Omnia confudit, summisq; immiscuit ima.
Ecce vetus calido versatus stipes aheno
Fit viridis primo, nec longo tempore frondes
Induit, & subitò gravidis oneratur olivis.
At quacunq; cavo spumas ejecit aheno
Ignis, & in terram gutta cecidere calentes,
Vernat humus, floresq; & mollia pabula surgunt.
Quæ simulac vidit, stricto Medea recludit
Ense senis jugulum, veterémq exire cruorem
Passa, replet succis, quos postquam combibit Æson,
Aut ore exceptos, aut vulnere, barba comæq;

Canitie

Canitie posita, nigrum rapuere colorem.
Pulsa fugit macies: abeunt pallorq; situsque;
Adjecto; cavæ supplentur corpore rugæ,
Membraq; luxuriant. Æson miratur, & olim
Ante quater denos hanc se reminiscitur annos;
Dissimilémq; animum subiit, ætate relictâ.

Sect. 44. Page 23. *Extoll the Suicide of* Cato.] As doth *Seneca* in several places; but *Lactantius* saith, he cast away his life, to get the reputation of a *Platonick* Philosopher, and not for fear of *Cæsar*; and 'tis very probable, he was in no great fear of death, when he slept so securely the night before his death, as the story reports of him.

Emori nolo, sed me esse mortuum, nihil curo. Were I of Cæsar's *Religion.*] I doubt not, but here is a fault of the Press, and that instead of *Cæsar* it should be *Cicero*. I meet not with any such saying imputed to *Cæsar*, nor any thing like it, but that he preferr'd a sudden death (in which he had his option) to any other; but I meet with such a saying in *Cicero* quoted out of *Epicharmus* [*Emori nolo, sed me esse mortuum nihili æstimo.*] Where *Cicero* sustaineth the part of the Epicure, that there is no hurt in being dead, since there remaineth nothing after it. *Cic. 1. Tusc. Qu. non procul ab initio.*

Or whence *Lucan* learn'd to say,

Sect. 45. Pag. 24. *Communis mundo superest rogus*, &c.] Why, *Lucan* was a Stoick, and 'twas an opinion among them almost generally, that the World should perish by Fire; therefore without doubt from them he learned it. *Cœlum quoque cum omnibus quæ in cœlo continentur, ita ut cœpisset desinere, fontium dulci aquâ marisve nutriri, in vim ignis abiturum. Stoicis constans opinio est, quòd consumpto humore mundus hic omnis ignescat.* *Minutius in Octav.* But *Minutius* should have excepted *Boëtius*, *Possidonius*, *Diogenes Babylonius*, and *Zeno Sidonius*, who were *Stoicks*, and yet did not think the world should be destroyed by fire, nor yet by any other means.

Sect. 46. Pag. 24. *How shall we interpret* Elias's *6000 years*, &c.] *Lactant.* is very positive that the world should last but 6000 years; but his reason for it is somewhat strange; thus it is, *Quoniam sex diebus cuncta Dei opera perfecta sunt, per secula sex*, i.e. *annorum sex millia manere in hoc statu mundum necesse est. De divino præmio*, cap. 14.

Sect. 47. Pag. 25. *Ipsa sui pretium virtus sibi, is but a cold principle.*] It is a Stoical principle. *Quæris enim aliquid supra summum, interrogas quid petam extra virtutem ipsam. Nihil enim habet melius. Pretium sui est.* Senec. *de vit. beat.* cap. 9.

That honest artifice of Seneca.] *What* that artifice was, is to be seen in *Senec. L. 1. Ep. 11. Aliquis vir bonus nobis eligendus est, & semper ante oculos habendus, ut sic tanquam illo spectante vivamus, & omnia tanquam illo vidente faciamus.* Et paulò pòst; *Elige itaq; Catonem; si hic videtur tibi nimis rigidus, elige remissiores animi virum Lelium*, &c. which though, as the Author saith, it be an honest artifice, yet cannot I but commend the party, and prefer the direction of him (whoever he were) who in the Margin of my *Seneca*, over against those words, wrote these: *Quin Deo potius qui semper omnibus omnia agentibus non tanquam sed reipsa adest, & videt; ac etiam ut Testis, vindex & punitor est male agentis.*

* *Tho. Aquir. in com. in Boet. de Consolat. propè finem.* *I have tried, if I could reach that great Resolution of his (that is of* Seneca*) to be honest without a thought of Heaven or Hell.*] * *Seneca* brags he could do this, in these words: *Si scirem Deos peccata ignoscituros, & homines ignoraturos, adhuc propter vilitatem peccati peccare erubescerem. Credat Judæus apella: non ego.*——

And Atheists have been the only Philosophers.] That is, if nothing remain after this life. St. *Aug.* was of this opinion. *Disputabam*——*Epicurum accepturum fuisse palmam in animo meo, nisi ego credidissem post mortem restare animæ vitam*, &c. Aug. *l. 6. conf. cap. 16.*

Sect. 48. Pag. 26. *God by a powerful voice shall command them back into their proper shapes.*] So *Minutius*, *Cæterum quis tam stultus est aut brutus, ut audeat repugnare hominem*

à Deo

à Deo ut primùm potuit fingi, ita posse denuo reformari, nihil esse post obitum, & ante ortum nihil fuisse; sicut de nihilo nasci licuit, ita de nihilo licere reparari. Porro difficilius est id quod sit incipere, quam id quod fuerit iterare. Tu perire Deo credis, si quid nostris oculis hebetibus subtrahitur. Corpus omne sive arescit in pulverem, sive in humorem solvitur, vel in cinerem comprimitur, vel in nidorem tenuatur; subducitur nobis, sed Deo elementorum custodi inseruntur. In Octav. Vide Grot. *de veritate Relig. Christian. ubi (lib. 2.) solvit objectionem, quod dissoluta corpora restitui nequeunt.*

Or conceive a flame that can either prey upon, or purifie the substance of a soul.] Upon this ground *Psellus lib. 1. de Energia Dæmonum*, c. 7. holds that Angels have bodies, (though he grants them to be as pure, or more pure than Air is) otherwise he could not apprehend how they should be tormented in Hell; and it may be upon this ground it was, that the Author fell into the error of the *Arabians*, mentioned by him *Sect. 7.* *Sect. 50.* Pag. 27.

There are as many Hells as Anaxagoras *conceited Worlds.*] I assure my self that this is false printed, and that instead of *Anaxagoras* it should be *Anaxarchus*; for *Anaxagoras* is reckon'd amongst those Philosophers that maintain'd the Unity of the World, but *Anaxarchus* (according to the opinion of *Epicurus*) held there were infinite Worlds. This is he that caus'd *Alexander* to weep by telling him there were infinite Worlds; whereby *Alexander* it seems was brought out of opinion of his Geography, who before that time thought there remained nothing, or not much beyond his Conquests. *Sect. 51.* Pag. 28.

It is hard to place those Souls in Hell.] *Lactantius* is alike charitably disposed towards those. *Non sum equidem tam iniquus ut eos putem divinare debuisse, ut veritatem per seipsos invenirent (quod fieri ego non posse confiteor) sed hoc ab eis exigo, quod ratione ipsa præstare potuerunt.* Lactant. *de orig. error. c.* 3. which is the very same with Sir *K. Digby*'s expression in his Observations on this place. I make no doubt at all (saith he) if any follow'd in the whole tenour of their lives, the dictaments of right reason, but that their journey was secure to Heaven. *Sect. 54.* Pag. 29.

Aristotle *transgress'd the rule of his own Ethicks.*] And so they did all, as *Lactantius* hath observed at large. *Aristot.* is said to have been guilty of great vanity in his Clothes, of incontinency, of unfaithfulness to his Master *Alexander*, &c. But 'tis no wonder in him, if our great *Seneca* be also guilty, whom truly notwithstanding St. *Jerome* would have inserted into the Catalogue of Saints, yet I think he as little deserv'd it, as many of the Heathens who did not say so well as he did; for I do not think any of them lived worse: to trace him a little. In the time of the Emperour *Claudius* we find he was banish'd for suspicion of incontinency with *Julia* the daughter of *Germanicus*. If it be said that this proceeded meerly from the spight of *Messalina*, (and that *Lipsius* did not complement with him in that kind *Apostrophe*, *Non expetit in te hæc culpa; O Romani nominis & Sapientiæ magnæ Sol. Not. in Tacit.*) why then did she not cause him to be put to death, as well as she did the other, who was her Husband's Niece? This for certain, whatever his life were, he had *paginam lascivam*, as may appear by what he hath written, *de Speculorum usu, l. 1. Nat. Qu. cap.* 16. Which (admitting it may in a Poet, yet) how it should be excus'd in a Philosopher I know not. To look upon him in his exile, we find that then he wrote his Epistle *De Consolat.* to *Polybius*, *Claudius* his creature (as honest a man as *Pallas* or *Narcissus*) and therein he extolls him and the Emperour to the Skies; in which he did grosly prevaricate, and lost much of his reputation, by seeking a discharge of his exile by so sordid a means. Upon *Claudius* his marriage with *Agrippina*, he was recall'd from Banishment by her means, and made *Prætor*; then he forgets the Emperour, having no need of him, labours all he can to depress him, and the hopeful *Britannicus*, and procured his Pupil *Nero* to be adopted and design'd Successor, and the Emperours own Son to be disinherited; and against the Emperour whom he so much praised when he had need of him, after his death he writes a scurrilous Libel. In *Nero*'s Court, how ungratefully doth he behave himself towards *Agrippina*! who although she *Sect. 55.* Pag. 29.

were a wicked woman, yet ſhe deſerv'd well of him, and of her Son too, who yet never was at reſt till he had taken away her life, and upon ſuſpicion caſt in againſt her by this man. Afterwards, not to mention that he made great haſt to grow rich, which ſhould not be the buſineſs of a Philoſopher, how well did it become his Philoſophy to play the Traytor againſt *Nero* himſelf, and to become a complice in the conſpiracy of *Piſo?* and then as good a Tragedian as he was, methinks he doth in *extremo actu deficere*, when he muſt needs perſwade *Paulina*, that excellent Lady his Wife, to die with him: what ſhould move him to deſire it? it could in his opinion be no advantage to her, for he believ'd nothing of the immortality of the Soul; (I am not ſatisfied with the reaſon of *Tacitus*, *Ne ſibi unicè dilectam ad injurias relinqueret*, becauſe he diſcredits it himſelf, in almoſt the next words, where he ſaith, *Nero* bore her no ill will at all, and would not ſuffer her to die) it muſt ſurely be then, becauſe he thought he had not liv'd long enough (being not above 114 years old, ſo much he was) and had not the fortitude to die, unleſs he might receive ſome confirmation in it by her example. Now let any man judge what a precious Legacy it is that he bequeaths by his Nuncupative Will to his friends, in *Tacitus*. *Converſus ad amicos* (ſaith he) *quando meritis eorum referre gratiam prohiberetur, quod unum jam tamen & pulcherrimum habebat, imaginem vitæ ſuæ relinquere teſtatur.* It cannot be denyed of him, that he hath ſaid very well; but yet it muſt as well be affirmed, that his Practice hath run counter to his Theory, to uſe the Authors phraſe.

The Scepticks *that affirmed they knew nothing.*] The ancient Philoſophers are divided into three ſorts, *Dogmatici*, *Academici*, *Sceptici*; the firſt were thoſe that delivered their opinions poſitively; the ſecond left a liberty of diſputing *pro & contra*; the third declared that there was no knowledge of any thing, no not of this very propoſition, That there is no knowledge; according to that,

——*Nihil ſciri ſiquis putat, id quoque neſcit An ſciri poſſit, quòd ſe nil ſci e fatetur.*

The Duke of Venice *that weds himſelf to the Sea by a Ring of Gold*, &c.] The Duke and Senate yearly on *Aſcenſion-day* uſe to go in their beſt Attire to the Haven at *Lio*, and there by throwing a Ring into the Water, do take the Sea as their Spouſe. *Vid. Hiſt. Ital.* by *W. Thomas Cambro-Brit.* *Busbequius* reports that there is a cuſtom amongſt the Turks, which they took from the Greek Prieſts, not much unlike unto this. *Cùm Græcorum ſacerdotibus mos ſit certo veris tempore aquas conſecrando mare clauſum veluti reſerare, ante quod tempus non facilè ſe committunt fluctibus; ab ea Ceremonia nec Turcæ abſunt.* Busb. *Ep.* 3. *legat. Turcic.*

But the Philoſopher that threw his money into the Sea, to avid avarice, &c.] This was *Apollonius Thyaneus*, who threw a great quantity of Gold into the Sea with theſe words, *Peſſundo divitias, ne peſſunder ab illis. Polycrates* the Tyrant of *Samos* caſt the beſt Jewel he had into the Sea, that thereby he might learn to compoſe himſelf againſt the viciſſitude of Fortune.

There go ſo many circumſtances to piece up one good action.] To make an action to be good, all the cauſes that concur muſt be good; but one bad amongſt many good ones, is enough to make it vitious, according to the rule, *Bonum ex cauſa integra, malum ex partiali.*

Sect. 56. Page 30. *The vulgarity of thoſe judgments that wrap the Church of God in* Strabo's *Cloak, and reſtrain it unto* Europe.] 'Tis *Strabonis tunica* in the tranſlation, but *Chlamydi* would do better, which is the proper expreſſion of the word that *Strabo* uſeth: it is not *Europe*, but the known part of the World that *Strabo* reſembleth to a Cloak, and that is it the Author here alludeth to; but we have no reaſon to think that the reſemblance of *Strabo* is very proper. *Vid.* Sir *Hen. Savil. in not. ad Tac. in vita Agricolæ.*

Sect. 57. Page 30. *Thoſe who upon a rigid Application of the Law, ſentence* Solomon *unto damnation*, &c.] St. *Aug.* upon *Pſal.* 126. and in many other places, holds that *Solomon* is damned; of the ſame opinion is *Lyra*, in 2 *Reg.* c. 7. and *Bellarm.* 1 *Tom. lib.* 1. *Controv* c. 5.

THE

THE SECOND PART.

I Wonder not at the French *for their diſhes of Frogs, Snails and Toad-ſtools.*] Toad-ſtools are not peculiar to the *French*; they were a great delicacy among the *Romans*, as appears every where in *Martial.* It was conceived the Emperour *Claudius* received his death by Poyſon, which he took in a Muſhrom, *Suet.* and *Tac.* *Sect.* 1. Pag. 33.

How among ſo many millions of Faces, there ſhould be none alike.] It is reported there have been ſome ſo much alike, that they could not be diſtinguiſhed; as King *Antiochus*, and one *Antemon* a Plebeian of *Syria*, were ſo much alike, that *Laodice*, the Kings widow, by pretending this man was the King, diſſembled the death of the King ſo long, till according to her own mind, a Succeſſor was choſen. *Cn. Pompeius*, and one *Vibius* the Orator; *C. Plancus*, and *Rubrius* the Stage-player; *Caſſius Severus* the Orator, and one *Mirmello*; *M. Meſſala Cenſorius*, and one *Menogenes*, were ſo much alike, that unleſs it were by their habit, they could not be diſtinguiſhed: but this you muſt take upon the Faith of *Pliny*, (*lib. 7. c. 12.*) and *Solinus*, (*cap. 6.*) who as this Author tells elſewhere, are Authors not very infallible. *Sect.* 2. Pag. 34.

What a κατεγχρυσομαχία *and hot ſkirmiſh is betwixt* S. *and* T. *in* Lucian] In his *Dialog. judicium vocalium*, where there is a large Oration made to the Vowels, being Judges, by *Sigma* againſt *Tau*, complaining that *Tau* has bereaved him of many words, which ſhould begin with *Sigma.* *Sect.* 3. Pag. 35.

Their Tongues are ſharper than Actius *his razour.*] *Actius Nævius* was chief Augur, who (as the ſtory ſaith) admoniſhing *Tarq. Priſcus* that he ſhould not undertake any action of moment, without firſt conſulting the Augur: the King (ſhewing that he had little faith in his skill) demanded of him, whether by the rules of his skill, what he had conceived in his mind might be done: to whom when *Actius* had anſwered it might be done, he bid him take a Whetſtone which he had in his hand, and cut it in two with a Razor; which accordingly the Augur did. *Livy.* And therefore we muſt conceive it was very ſharp. Here the Adage was croſs'd, ξυρὸς εἰς ἀκόνλω, *i. e. novacula in cotem. Vide. Eraſm. Chiliad.*

It is not meer Zeal to Learning, or devotion to the Muſes, that wiſer Princes Patronize the Arts, &c. *but a deſire to have their Names eterniz'd by the memory of their Writings.*] There is a great Scholar, who took the boldneſs to tell a Prince ſo much. *Eſt enim bonorum principum cum viris eruditis tacita quædam naturaliſque ſocietas, ut alteri ab alteris illuſtrentur, ac dum ſibi mutuò ſuffragantur, & gloria principibus, & doctis authoritas concilietur.* Politian. *Ep. Ludovic. Sfort. quæ extat lib.* 11. *Ep. ep.* 1. And to this Opinion aſtipulates a Country-man of our own, whoſe words are theſe: *Ignotus eſſet Lucilius, niſi cum Epiſtolæ Senecæ illuſtrarent. Laudibus Cæſareis plus Virgilius & Varius*

Varus Lucanúſque adjecerunt, quàm immenſum illud ærarium quo urbem & orbem ſpoliavit. Nemo prudentiam Ithaci aut Pelidæ vires agnoſceret, niſi eas Homerus divino publicâſſet ingenio: unde nihil mihi videtur conſultius viro ad gloriam properanti fidelium favore ſcriptorum. Joan. Sarisb. Polycrat. *lib.* 8. *cap.* 14. And that Princes are as much beholding to the Poets Pens as their own Swords, *Horace* tells *Cenſorinus* with great confidence; *Od.* 8. *l.* 4. *Non inciſa notis*, &c.

Sect. 4. Pag. 36. *St.* Paul *that calls the* Cretians *lyars, doth it but indirectly, and upon quotation of one of their own Poets.*] That is, *Epimenides*; the place is, *Tit.* 1. *v.* 12. where *Paul* uſeth this verſe, taken out of *Epimenides*,

Κρῆτες ἀεὶ ψεῦσται, κακὰ θηρία, γαστέρες ἀργαί.

It is as bloudy a thought in one way, as Nero's *was in another. For by a word we wound a thouſand.*] I ſuppoſe he alludes to that paſſage in *Sueton.* in the Life of *Nero*, where he relates that a certain perſon upon a time, ſpoke in his hearing theſe words,

Ἐμοῦ θανόντος γαῖα μιχθήτω πυρί.

i. e. When I am dead, let Earth be mingled with Fire. Whereupon the Emperour uttered theſe words, Ἐμοῦ ζῶντος, *i. e. Yea whilſt I live:* there by one word, he expreſs'd a cruel thought, which I think is the thing he meant; this is more cruel than the wiſh of *Caligula*, that the people of *Rome* had but one Neck, that he might deſtroy them all at a blow.

Sect. 6. Pag. 38. *I cannot believe the ſtory of the* Italian, *&c.*] It is reported that a certain *Italian* having met with one that had highly provoked him, put a Ponyard to his Breaſt, and unleſs he would blaſpheme God, told him he would kill him; which the other doing to ſave his life, the *Italian* preſently kill'd him, to the intent he might be damned, having no time of Repentance.

I have no Sins that want a Name.] The Author in *cap. ult. lib. ult. Pſeudodox.* ſpeaking of the Act of carnality exerciſed by the *Egyptian* Pollinctors with the dead carcaſſes, ſaith we want a name for this, wherein neither *Petronius* nor *Martial* can relieve us; therefore I conceive the Author here means a venereal ſin.

This was the Temper of that Lecher that carnal'd with a Statua.] The Latine Annotator upon this hath theſe words: *Romæ refertur de Hiſpano quodam.* But certainly the Author means the Statue of *Venus Gnidia* made by *Praxiteles*, of which a certain young man became ſo enamoured, that *Pliny* relates, *Ferunt amore captum cùm delituiſſet noctu ſimulachro cohæſiſſe, ejúſq; cupiditatis eſſe indicem maculam. Lucian* alſo has the ſtory in his *Dialog.* [*Amores.*]

And the conſtitution of Nero *in his Spintrian Recreations.*] The Author doth not mean the laſt *Nero*, but *Tiberius* the Emperour, whoſe name was *Nero* too; of whom *Sueton. Seceſſu verò Capreenſi etiam ſellariam excogitavit ſedem arcanarum libidinum, in quam undique conquiſiti puellarum & exoletorum greges monſtroſique concubitûs repertores, quos ſpintrias appellabat, triplici ſerie connexi invicem inceſtarent ſe coram ipſo, ut adſpectu deficientes libidines excitaret,* Suet. *in Tib.* 43.

Sect. 8. Pag. 39. *I have ſeen a Grammarian toure and plume himſelf over a ſingle line in* Horace, *and ſhew more pride,* &c.] *Movent mihi ſtomachum Grammatiſtæ quidam, qui cùm duas tenuerint vocabulorum origines ita ſe oſtentant, ita venditant, ita circumferunt jactabundi, ut præ ipſis pro nihilo habendos Philoſophos arbitrentur.* Picus Mirand. *in Ep. ad Hermol. Barb. quæ exſtat lib. nono Epiſt. Politian.*

Garſio quiſq; duas poſtquam ſcit jungere partes,
Sic ſtat, ſic loquitur, velut omnes noverit artes.

I cannot think that Homer *pin'd away upon the Riddle of the Fiſhermen.*] The

Hiſtory

Hiſtory out of *Plutarch* is thus: Sailing from *Thebes* to the Iſland *Ion*, being landed and ſet down upon the ſhore, there happen'd certain Fiſhermen to paſs by him, and he asking them what they had taken, they made him this Enigmatical anſwer, That what they had taken, they had left behind them; and what they had not taken, they had with them: meaning, that becauſe they could take no Fiſh, they went to louſe themſelves; and that all which they had taken, they had killed, and left behind them; and all which they had not taken, they had with them in their Clothes: and that *Homer* being ſtruck with a deep ſadneſs becauſe he could not interpret this, pin'd away, and at laſt died. *Pliny* alludes to this Riddle, in his *Ep.* to his Friend *Fuſcus*, where giving an account of ſpending his time in the Country, he tells him, *Venor aliquando, ſed non ſine pugillaribus, ut quamvis nihil ceperim, non nihil referam.* Plin. *Ep. lib.* 9. *Ep.* 36.

Or that Ariſtot.——*did ever drown himſelf, upon the flux or reflux of* Euripus.] *Laertius* reports that *Ariſtotle* died of a diſeaſe at 63——years of Age. For this and the laſt, ſee the Author in *Pſeudodox.*

Ariſtotle *doth but inſtruct us as* Plato *did him, to confute himſelf.*] In the matter of *Idea's*, Eternity of the World, *&c.*

I could be content that we might procreate like trees without conjunction, or that there were any way to perpetuate the World without this trivial and vulgar way of Coition: It is the fooliſheſt act a wiſe man commits in all his life.] *Sect.* 9. Pag. 40. There was a Phyſician long before the Author, that was of the ſame opinion, *Hippocrates*; for which *vide A. Gel. l.* 19. *Noct. Attic. c.* 2. And ſo of late time was *Paracelſus*, who did undertake to preſcribe a way for the generation of a man without coition. *Vide Campanel, de ſenſu rerum, in Append. ad* cap. 19. l. 4. *Monſieur Montaign*'s words on this ſubject, are worth the reading; theſe they are: *Je trouve apres tout, que l' amour n' eſt autre choſe que la faim de cette jouyſſance, & conſiderant maintes fois ridicule titillation de ſe plaiſer par ou il nous tient, les abſurdes movements, eſcervelez & eſtourdis dequoy il agit Zenon & Cratippus, ceſte rage indiſcrete, ce viſage inflamme de fureur & de cruante au plus doux effect de l' amour, & puis cette morgue grave ſevere & extatique en un action ſi folle, & que la ſupreme volupte aye du trainſy & du plaintiff commer la doleur, je croye qu' au ſe joue de nous, & que c'eſt par induſtrie que nature nous a laiſſe la plus trouble de nos actions les plus communes pour nous eſgaller par la & apparier les fols & les ſages: & nous & les beſtes, le plus contemplatif & prudent homme quand je l' imagine en cette aſſiette je le tien pour un affronteur, de faire le prudent & le contemplatif, ceſont les pieds du paon qui abbatent ſon orgueil, nous mangeons bien & beavons comme les beſtes, mais ſe ne ſont pas actions, qui empeſchent les operations de noſtre ame, en celle-ſle nous gradons noſtre advantage ſur elles: cette-cy met tout autre penſee ſans le joug abrutiſt & abeſiit par ſon imperieuſe authorite taute la Theology & Philoſophy qui eſt en Platon & ſi il ne ſen plaint pas, par tout allours vous pouvez garder quelque decence toutes autres operations ſouffrent des Regles d' honeſtete cette-cy ne ſe peut ſeulement imaginer que vitieuſe ou ridicule trouvezy pourvoir un proceder ſage & diſcret. Alexander diſoit qu'il ſe cognoſſoit principalement mortel par cette action & par le dormir: le ſommeil ſuffoque & ſupprime les facultez de noſtre ame, la beſoigne les abſorbe & diſſipe de meſme. Cette c'eſt un marque non ſeulement de noſtre corruption originelle, mais auſſi de noſtre vanite & diſformite. D'un coſte nature nous y pouſſe ayant attache a ce deſire la plus noble, utile & plaiſant de toutes ſes operations, & la nous laiſſe d' autre part accuſer & fuyr romme inſolent & diſhoneſte, en rougir & ce commander l' abſtinence,* &c. Montaign *liv.* 3. *chapit.* 5.

And may be inverted on the worſt.] *Sect.* 10. Page 41. That is, that there are none ſo abandoned to vice, but they have ſome ſprinklings of vertue. There are ſcarce any ſo vicious, but commend vertue in thoſe that are endued with it, and do ſome things laudable themſelves, as *Plin.* ſaith in *Panegyric.* *Machiavel* upon *Livy, lib.* 1. *cap.* 27. ſets down the enſuing relation as a notable confirmation of this truth. *Julius Pontifex, ejus nominis ſecundus, anno ſalutis* 1505. *Bononiam exercitus duxit, ut Bentivolorum familiam, quæ ejus urbis imperium centum jam annos tenuerat, loco moveret. Eâdemq; in expeditione etiam Johannem Pagolum, Bagloneum tyrannum Peruſinum ſuâ ſede expellere decreverat, ut cæteros item, qui*

urbes

urbes Eccleſiæ per vim terèrent. Ejus rei causâ cùm ad Peruſinam urbem acceſſiſſet, & notum jam omnibus eſſet quid in animo haberet: tamen impatiens moræ, noluit exercitus expectare, ſed inermis quaſi urbem ingreſſus eſt, in quam Johannes Pagolus defendendi ſui causâ, non exiguas copias contraxerat. Is autem eodem furore, quo res ſuas adminiſtrare ſolebat, unà cum milite, cui cuſtodiam ſui corporis demandârat, ſeſe in pontificis poteſtatem dedidit; à quo abductus eſt, relictúſque alius, qui Eccleſiæ nomine urbem gubernaret. Hac ipſa in re magnopere admirati ſunt viri ſapientes, qui Pontificem comitabantur, cùm Pontificis ipſius temeritatem, cùm abjectum vilémque Johannis Pagoli animum: nec cauſam intelligebant, ob quam permotus idem Pagolus, hoſtem ſuum inermem (quod illi cum perpetua nominis ſui memoria facere licebat) non ſubitò oppreſſerit, & tam pretioſa ſpolia diripuerit; cùm Pontifex urbem ingreſſus fuiſſet, Cardinalibus tantum ſuis ſtipatus, qui pretioſiſſimas quaſq; ſuarum rerum ſecum habebant. Neque enim credebatur Pagolus à tanto facinore vel ſuâ bonitate, vel animi conſcientiâ abſtinuiſſe: quòd in hominem ſceleratum, qui & propriâ ſorore utebatur, & conſobrinos nepotéſque dominandi causâ è medio ſuſtulerat hujuſmodi pii affectus cadere non viderentur. Cùm igitur hac de re variè eſſent ſapientum virorum ſententiæ; concluſerunt tandem id ei accidiſſe, quod ita comparatum ſit, ut homines neque planè pravi eſſe queant, neque perfectè boni. *Pravi perfectè eſſe nequeant, propterea quòd, ubi tale quoddam ſcelus eſt, in quo aliquid magnifici ac generoſi inſit, id patrare non audeant. Nam cùm Pagolus neq; inceſtum prius horruiſſet, neque parricidio abſtinuiſſet: tamen cùm oblata eſſet occaſio, pravi quidem ſed memorabilis, atque æternæ memoriæ facinoris patrandi, id attentare non auſus fuit, cùm id ſine infamia præſtare licuiſſet, quòd rei magnitudo omnia priora ſcelera obtegere potuiſſet, & à periculo conſervare. Quibus accedit, quòd illi gratulati fuiſſent etiam quam plurimi, ſi primus auſus eſſet. Pontificibus monſtrare rationem dominandi; totiúſque humanæ vitæ uſum ab illis nimis parvi pendi.*

Poyſons contain within themſelves their own Antidote.] The Poyſon of a Scorpion is not Poyſon to it ſelf, nor the Poyſon of a Toad is not Poyſon to it ſelf; ſo that the ſucking out of Poyſon from perſons infected by Pſylls, (who are continually nouriſhed with venomous aliment) without any prejudice to themſelves, is the leſs to be wondred at.

The man without a Navel yet lives in me.] The *Latin* Annotator hath explicated this by *Homo non perfectus*, by which it ſeems he did not comprehend the Author's meaning; for the Author means *Adam*, and by a Metonymie, original ſin; for the Navel being only of uſe to attract the aliment *in utero materno*, and *Adam* having no mother, he had no uſe of a Navel, and therefore it is not to be conceived he had any; and upon that ground the Author calls him the man without a Navel.

Sect. 11. Page 42. *Our groſſer memories have then ſo little hold of our abſtracted underſtandings, that they forget the ſtory, and can only relate to our awaked ſenſes a confuſed and broken tale of that that hath paſſed.*] For the moſt part it is ſo. In regard of the Author's expreſſion of forgetting the ſtory, though otherwiſe it be not very pertinent to this place, I ſhall ſet down a relation given by an *Engliſh* Gentleman, of two dreams that he had, wherein he did not forget the ſtory, but (what is more ſtrange) found his dreams verified. This it is:

Whilſt I lived at *Prague*, and one night had ſat up very late drinking at a Feaſt, early in the morning the Sun-beams glancing on my face, as I lay in my bed, *I* dreamed that a ſhadow paſſing by told me that my Father was dead: at which awaking all in a ſweat, and affected with this dream, I roſe and wrote the day and hour, and all circumſtances thereof in a Paper-Book, which Book with many other things I put into a Barrel, and ſent it from *Prague* to *Stade*, thence to be conveyed into *England*. And now being at *Nurenburgh*, a Merchant of a noble Family well acquainted with me and my friends, arrived there, who told me my Father died ſome two months ago. I liſt not to write any lyes, but that which *I* write, is as true as ſtrange. When *I* returned into *England* ſome four years after, *I* would not open the Barrel *I* ſent from *Prague*, nor look into the Paper-book in which *I* had written this Dream, till *I* had called my Siſters and ſome friends to be witneſſes, where my ſelf and they were aſtoniſhed to ſee my written Dream anſwer the very day of my Father's death.

I may

I may lawfully ſwear that which my Kinſman hath heard witneſſed by my Brother *Henry* whilſt he lived, that in my youth at *Cambridge*, *I* had the like Dream of my Mother's death, where my Brother *Henry* living with me, early in the morning *I* dreamed that my Mother paſſed by with a ſad countenance, and told me that ſhe could not come to my Commencement: *I* being within five months to proceed Maſter of Arts, and ſhe having promiſed at that time to come to *Cambridge*. And when *I* related this Dream to my Brother, both of us awaking together in a ſweat, he proteſted to me that he had dreamed the very ſame: and when we had not the leaſt knowledg of our Mothers ſickneſs, neither in our youthful affections were any whit affected with the ſtrangeneſs of this dream, yet the next Carrier brought us word of our Mothers death. Mr. *Fiennes Moriſon* in his *Itinerary*. I am not over-credulous of ſuch relations, but methinks the circumſtance of publiſhing it at ſuch a time, when there were thoſe living that might have diſprov'd it, if it had been falſe, is a great argument of the truth of it.

I wonder the fancy of Lucan *and* Seneca *did not diſcover it.*] For they had both power from *Nero* to chuſe their deaths. *Sect.* 12. Pag. 43.

To conceive our ſelves Urinals is not ſo ridiculous.] *Reperti ſunt, Galeno & Avicennâ teſtibus, qui ſe vaſa fictilia crederent, & idcirco hominum attactum ne confringerentur ſolicitè fugerent.* Pontan. *in Attic. Bellar.* (*Hiſt.* 22.) which proceeds from extremity of Melancholy. *Sect.* 13. Page 43.

Ariſtotle *is too ſevere, that will not allow us to be truly liberal without wealth.*] *Ariſtot. l.* 1. *Ethic.* c. 8.

Thy will be done though in mine own undoing] This ſhould be the wiſh of every man, and is of the moſt wiſe and knowing. *Le Chriſtien plus humble & plus ſage & mieux recognoiſſant que ce'ſt que de lay ſe rapporte a ſon Createur de choiſir & ordonner ce qu' il luy faut. Il ne le ſupplie d'autre choſe que ſa volonté ſoit faite.* Montaign. *Sect.* 15. Page 45.

FINIS.

OBSER-

OBSERVATIONS

UPON

Religio Medici.

Occasionally Written

By Sir KENELM DIGBY, *Knight.*

The Sixth Edition,

Corrected and Enlarged.

LONDON,

Printed for *Robert Scott, Thomas Basset, Richard Chiswell,*
and the Executor of *John Wright.* 1686.

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OBSERVATIONS UPON RELIGIO MEDICI.

To the Right Honourable *Edward* Earl of *Dorſet*, Baron of *Buckhurſt*, &c.

My Lord,

I Received yeſternight, your Lordſhip's of the Nineteenth current, wherein you are pleaſed to oblige me, not only by extream gallant expreſſions of favour and kindneſs, but likewiſe by taking ſo far into your care the expending of my time, during the tediouſneſs of my reſtraint, as to recommend to my reading a *Book*, that had received the honour and ſafeguard of your approbation; for both which I moſt humbly thank your Lordſhip. And ſince I cannot in the way of gratefulneſs expreſs unto your Lordſhip as I would, thoſe hearty ſentiments I have of your goodneſs to me; I will at the leaſt endeavour, in the way of *Duty* and *Obſervance*, to let you ſee how the little needle of my Soul is throughly touched at the great Loadſtone of yours, and followeth ſuddenly and ſtrongly, which way ſoever you beckon it. In this occaſion, the Magnetick motion was impatient to have the *Book* in my hands, that your Lordſhip gave ſo advantageous a Character of; whereupon I ſent preſently (as late as it was) to *Pauls*-Church-yard, for this Favourite of yours, *Religio Medici*: which after a while found me in a condition fit to receive a Bleſſing by a viſit from any of ſuch Maſter-pieces, as you look upon with gracious eyes: for I was newly gotten into my Bed. This good-natur'd creature I could eaſily perſwade to be my Bed-fellow, and to wake with me, as long as I had any edg to entertain my ſelf with the delights I ſucked from ſo noble a converſation. And truly (my Lord) I cloſed not my eyes, till I had enricht my ſelf with, (or at leaſt exactly ſurveyed) all the treaſures that are lapped up in the foids of thoſe few ſheets. To return only a general commendation of this curious Piece, or at large to admire the Author's Spirit and ſmartneſs, were too perfunctory an account, and too ſlight an one, to ſo diſcerning and ſteddy an eye as yours, after ſo particular and encharged a Summons to read heedfully this Diſcourſe. I will therefore preſume to blot a ſheet or two of Paper with my reflections upon ſundry

passages through the whole Context of it, as they shall occur to my remembrance. Whereas now your Lordship knoweth, this Packet is not so happy as to carry with it any other expression of my obsequiousness to you: it will be but reasonable, you should even here give over your further trouble of reading, what my respect ingageth me to the writing of.

Whose first step is ingenuity and a well natur'd evenness of *Judgment*, shall be sure of applause and fair hopes in all men for the rest of his *Journey*. And indeed (my Lord) me thinketh this Gentleman setteth out excellently poised with that happy temper: and sheweth a great deal of *Judicious Piety* in making a right use of the blind zeal that *Bigots* lose themselves in. Yet *I* cannot satisfie my Doubts throughly, how he maketh good his professing to follow the great Wheel of the Church in matters of *Divinity*; which surely is the solid *Basis* of true *Religion*: for to do so, without jarring against the Conduct of that first Mover by Eccentrical and irregular Motions, obligeth one to yield a very dutiful obedience to the Determinations of it, without arrogating to ones self a controuling Ability in liking or misliking the Faith, Doctrine and Constitutions of that *Church* which one looketh upon as their North-Star: Whereas, if *I* mistake not, this Author approveth the Church of *England*, not absolutely, but comparatively with other Reformed Churches.

My next Reflection is, concerning what he hath sprinkled (most wittily) in several places, concerning the Nature and immortality of a humane Soul, and the Condition and State it is in, after the dissolution of the Body. And here give me leave to observe what our Country-man *Roger Bacon* did long ago: *That those students, who busie themselves much with such Notions, as reside wholly in the fantasie, do hardly ever become idoneous for abstracted Metaphysical Speculations, the one having Bulkie Foundation of Matter, or of the Accidents of it, to settle upon, (at the least, with one foot:) The other flying continually, even to a lessening pitch, in the subtil Air. And accordingly, it hath been generally noted, that the exactest Mathematicians, who converse altogether with Lines, Figures, and other Differences of Quantity, have seldom proved eminent in Metaphysicks, or speculative Divinity. Nor again, the Professors of these Sciences, in the other Arts. Much less can it be expected that an excellent Physician, whose fancy is always fraught with the material Drugs that he prescribeth his Apothecary to compound his Medicines of, and whose hands are inured to the cutting up, and eyes to the Inspection of Anatomized Bodies, should easily, and with success, flie his thoughts at so towring a* Game, *as a pure Intellect, a separated and unbodied Soul.* Surely this acute *Author's* sharp wit, had he orderly applied his Studies that way, would have been able to satisfie himself with less labour, and others with more plenitude, than it hath been the Lot of so dull a brain, as mine, concerning the *Immortality of the Soul.* And yet, *I* assure you (my *Lord*) the little *Philosophy* that is allowed me for my share, demonstrateth this Proposition to me, as well as Faith delivereth it, which our *Physician* will not admit in his.

To make good this Assertion here, were very unreasonable, since that to do it exactly (and without exactness, it were not demonstration) requireth a total Survey of the whole Science of *Bodies*, and of all the operations that we are conversant with, of a rational Creature: which *I* having done with all the succinctness *I* have been able, to explicate so knotty a Subject with, hath taken me up in the first draught near two hundred sheets of Paper. *I* shall therefore take leave of this Point, with only this Note, That *I* take the *Immortality of the Soul* (under his favour) to be of that Nature, that to them only that are not versed in the ways of proving it by Reason, it is an Article of Faith: to others, it is an evident Conclusion of demonstrative Science.

And with a like short Note, *I* shall observe, how if he had traced the Nature of the *Soul* from its first Principles, he could not have suspected it should sleep in the Grave, till the *Resurrection* of the Body. Nor would he have permitted his compassionative Nature to imagin it belonged to Gods mercy (as the *Chiliasts* did) to change its condition in those that are damned, from pain to happiness. For where God should have done that, he must

have

have made that anguiſhed Soul another creature than it was (as to make fire ceaſe from being hot, requireth to have it become another thing than the *Element* of fire;) ſince, that to be in ſuch a condition, as maketh us underſtand damned ſouls miſerable, is a neceſſary effect of the temper it is in, when it goeth out of the *Body*, and muſt neceſſarily (out of its own Nature) remain in, unvariably for all Eternity; *Though*, for the Conceptions of the vulgar part of Mankind, (who are not capable of ſuch abſtruſe notions) it be ſtyled, (and truly too) the ſentence and puniſhment of a ſevere *Judge*.

I am extreamly pleaſed with him, when he ſaith, There are not Impoſſibilities enough in *Religion* for an active Faith: And no whit leſs, when in *Philoſophy* he will not be ſatisfied with ſuch naked terms, as in *Schools* uſe to be obtruded upon eaſie minds, when the *Maſters* fingers are not ſtrong enough to untye the Knots propoſed unto them. I confeſs, when I enquire what Light (to uſe our Authors example) is, I ſhould be as well contented with his ſilence, as with his telling me it is *actus perſpicuus*; unleſs he explicate clearly to me, what thoſe words mean, which I find very few go about to do. Such meat they ſwallow whole, and eject it as entire. But were ſuch things Scientifically and Methodically declared, they would be of extream ſatisfaction and delight. And that work taketh up the greateſt part of my formerly mentioned Treatiſe. For I endeavour to ſhew by a continued Progreſs, and not by Leaps, all the Motions of Nature; and unto them to fit intelligibly the terms uſed by her beſt Secretaries; whereby all wild fantaſtick Qualities and Moods (introduced for refuges of ignorance) are baniſhed from my Commerce.

In the next place (my Lord) I ſhall ſuſpect that our Author hath not penetrated into the bottom of thoſe Conceptions, that deep Scholars have taught us of *Eternity*; Methinketh he taketh it for an infinite Extenſion of time, and a never ending Revolution of continual Succeſſion: which is no more like *Eternity*, than a groſs body is like a pure *Spirit*. Nay, ſuch an Infinity of Revolutions, is demonſtrable to be a Contradiction, and impoſſible. In the ſtate of *Eternity* there is no Succeſſion, no Change, no Variety. *Souls* or *Angels*, in that condition, do not ſo much as change a thought. All things, notions and actions that ever were, are, or ſhall be in any creature, are actually preſent to ſuch an Intellect. And this (my *Lord*) I aver, not as deriving it from *Theology*, and having recourſe to Beatifick Viſion, to make good my Tenet, (for ſo, only glorified creatures ſhould enjoy ſuch immenſe knowledg) but out of the principles of *Nature* and *Reaſon*, and from thence ſhall demonſtrate it to belong to the loweſt *Soul* of the ignoranteſt wretch whilſt he lived in this world, ſince damned in *Hell*. A bold undertaking, you will ſay. But I confidently engage my ſelf to it. Upon this occaſion occurreth alſo a great deal to be ſaid of the Nature of *Predeſtination* (which by the ſhort touches our Author giveth of it, I doubt he quite miſtakes) and how it is an unalterable *Series* and *Chain of Cauſes*, producing *Infallible* (and in reſpect of them, neceſſary) Effects. But that is too large a *Theme* to unfold here; too vaſt an *Ocean* to deſcribe, in the ſcant Map of a Letter. And therefore I will refer that to a fitter opportunity, fearing I have already too much treſpaſſed upon your Lordſhips patience; but that indeed, I hope, you have not had enough to read thus far.

I am ſure, my *Lord*, that you (who never forgot any thing, which deſerved a room in your Memory) do remember how we are told, that *Abyſſus abyſſum invocat*. So here our Author, from the Abyſs of *Predeſtination*, falleth into that of the *Trinity* of *Perſons*, conſiſtent with the Indiviſibility of the Divine Nature: And out of that (if I be not exceedingly deceived) into a third of miſtaking, when he goeth about to illuſtrate this admirable Myſtery by a wild Diſcourſe of a *Trinity* in our *Souls*. The dint of Wit is not forcible enough to diſſect ſuch tough Matter; wherein all the obſcure glimmering we gain of that inacceſſible Light, cometh to us clothed in the dark weeds of Negations, and therefore little can we hope to meet with any poſitive Examples to parallel it withal.

I doubt,

I doubt, he alſo miſtaketh, and impoſeth upon the ſeveral *Schools*, when he intimateth, that they gainſay this viſible worlds being but a Picture or Shadow of the Inviſible and Intellectual: which manner of *Philoſophizing*, he attributeth to *Hermes Triſmegiſtus*; but is every where to be met with in *Plato*; and is raiſed ſince to a greater height in the Chriſtian Schools.

But I am ſure he learned in no good School, nor ſucked from any good *Philoſophy* to give an actual Subſiſtence and being to firſt Matter without a Form. He that will allow that a *Real Exiſtence* in Nature is as ſuperficially tincted in *Metaphyſicks*, as another would be in *Mathematicks*, that ſhould allow the like to a Point, a Line, or a Superficies in Figures; Theſe, in their ſtrict Notions, are but Negations of further Extenſion, or but exact Terminations of that Quantity, which falleth under the Conſideration of the Underſtanding, in the preſent purpoſe; no real Entities in themſelves: ſo likewiſe, the Notions of Matter, Form, Act, Power, Exiſtence, and the like, that are with Truth conſidered by the Underſtanding, and have there each of them a diſtinct Entity, are nevertheleſs no where by themſelves in Nature. They are terms which we muſt uſe in the negotiations of our thoughts, if we will diſcourſe conſequently, and conclude knowingly. But then again, we muſt be very wary of attributing to things in their own Natures, ſuch Entities as we create in our Underſtandings, when we make Pictures of them there; for there every different conſideration, ariſing out of the different impreſſion which the ſame thing maketh upon us, hath a diſtinct Being by it ſelf: *Whereas* in the thing, there is but one ſingle *Unity*, that ſheweth (as it were in a Glaſs, at ſeveral Poſitions) thoſe various faces in our Underſtanding. In a word, all theſe words are but artificial terms, not real things. And the not right underſtanding of them, is the dangerouſeſt Rock that *Scholars* ſuffer ſhipwrack againſt.

I go on with our *Phyſicians* Contemplations. Upon every occaſion, he ſheweth ſtrong parts, and a vigorous brain. His wiſhes and aims, and what he pointeth at, ſpeak him owner of a noble and a generous heart. He hath reaſon to wiſh that *Ariſtotle* had been as accurate in examining the Cauſes, Nature and Affections of the great Univerſe he buſied himſelf about, as his Patriarch *Galen* hath been in the like conſiderations upon this little *World*, Mans Body, in that admirable Work of his *De Uſu Partium*. But no great humane thing was ever born and perfected at once. It may ſatisfie us, if one in our age, buildeth that magnificent Structure upon the others foundations; and eſpecially, if where he findeth any of them unſound, he eradicateth thoſe, and fixeth new unqueſtionable ones in their room: But ſo, as they ſtill ingroſs, keep a proportion, and bear a *Harmony* with the others great Work This hath now (even now) our learned Countryman done; The knowing Mr. *White*, (whoſe name, I believe, your Lordſhip hath met withal) in his excellent Book, *De mundo*, newly printed at *Paris*, where he now reſideth, and is admired by the World of Letter'd men there, as the *Prodigie* of theſe latter times. Indeed his three *Dialogues* upon that Subject, (if I am able to judge any thing) are full of the profoundeſt Learning I ever yet met withal. And I believe, who hath well read and digeſted them, will perſwade himſelf, there is no truth ſo abſtruſe, nor hitherto conceived out of our reach, but mans wit may raiſe Engines to ſcale and conquer. I aſſure my ſelf, when our Author hath ſtudied him throughly, he will not lament ſo loud for *Ariſtotle*'s mutilated and defective *Philoſophy*, as in *Boccaline Cæſar Caporali* doth for the loſs of *Livie*'s ſhipwracked *Decads*.

That *Logick* which he quarrelleth at, for calling a *Toad*, or *Serpent* ugly, will in the end agree with his; for no body ever took them to be ſo, in reſpect of the *Univerſe*, (in which regard, he defendeth their Regularity and Symmetry) but only as they have relation to us.

But I cannot ſo eaſily agree with him, when he affirmeth, that *Devils*, or other *Spirits* in the Intellectual World, have no exact *Ephemerides*, wherein they may read before-hand the Stories of fortuite Accidents. For I believe, that all Cauſes are ſo immediately chained to their effects, as if a perfect knowing Nature get hold but of one link, it will drive the entire *Series*, or

Pedigree

Pedigree of the whole, to each utmoſt end; (as I think I have proved in my fore-named Treatiſe) ſo that in truth, there is no Fortuitneſs or Contingency of things, in reſpect of themſelves, but only in reſpect of us, that are ignorant of their certain and neceſſary Cauſes.

Now a like *Series* or Chain and Complex of all outward Circumſtances, (whoſe higheſt Link, *Poets* ſay prettily, is faſtned to *Jupiter*'s Chair, and the loweſt is rivetted to every Individual on earth) ſteered and levelled by *God Almighty*, at the firſt ſetting out of the firſt Mover; I conceive, to be that *Divine Providence* and *Mercy*, which (to uſe our Author's own example) giveth a thriving *Genius* to the *Hollanders*, and the like: And not any ſecret, inviſible, myſtical Bleſſing, that falleth not under the ſearch or cognizance of a prudent indagation.

I muſt needs approve our Author's Æquanimity, and I may as juſtly ſay his Magnanimity, in being contented ſo cheerfully (as he ſaith) to ſhake hands with the fading *Goods* of *Fortune*, and be deprived of the joys of her moſt precious bleſſings; ſo that he may in recompence poſſeſs in ample meaſure the true ones of the mind; like *Epictetus*, that great Maſter of Moral Wiſdom and Piety, who taxeth them of high injuſtice, that repine at Gods Diſtribution of his Bleſſings, when he putteth not into their ſhare of goods, ſuch things as they uſe no Induſtry or Means to purchaſe. For why ſhould that man, who above all things eſteemeth his own freedom, and who to enjoy that, ſequeſtreth himſelf from commerce with the vulgar of Mankind, take it ill of his *Stars*, if ſuch Preferments, Honours, and Applauſes meet not him, as are painfully gained, after long and tedious Services of *Princes*, and brittle Dependances of humorous Favourites, and ſupple Compliances with all ſorts of Natures? As for what he ſaith of *Aſtrologie*; I do not conceive, that wiſe men reject it ſo much for being repugnant to *Divinity* (which he reconcileth well enough) as for having no ſolid Rules or ground in Nature. To relie too far upon that vain Art I judge to be rather folly than impiety, unleſs in our cenſure we look to the firſt *Origine* of it, which ſavoureth of the Idolatry of thoſe *Heathens*, that worſhipping the *Stars* and heavenly Bodies for *Deities*, did in a ſuperſtitious Devotion, attribute unto them the Cauſality of all Effects beneath them. And for ought I know, the belief of ſolid *Orbs* in the Heavens, and their regularly-irregular Motions, ſprung from the ſame root. And a like Inanity I ſhould ſuſpect in *Chiromancy*, as well as *Aſtrologie*, (eſpecially, in particular contingent Effects) however our *Author*, and no leſs a man than *Ariſtotle*, ſeem to attribute ſomewhat more to that conjectural Art of *Lines*.

I ſhould much doubt (though our Author ſheweth himſelf of another mind) that *Bernardinus Ochinus* grew at the laſt to be a meer *Atheiſt*: When after having been firſt the Inſtitutor and *Patriarch* of the *Capucine Order* (ſo violent was his zeal then, as no former religious Inſtitution, though never ſo rigorous, was ſtrict enough for him) he from thence fell to be firſt an *Heretick*, then a *Jew*, and after a while became a *Turk*; and at the laſt wrote a furious Invective againſt thoſe, whom he called the three *Grand Impoſtors* of the *World*, among whom he ranked our Saviour *Chriſt*, as well as *Moſes* and *Mahomet*.

This Story I have but upon relation, yet of a very good hand

I doubt he miſtakes in his *Chronologie*, or the Printer in the name, when he maketh *Ptolomy* condemn the *Alchoran*.

He needeth not be ſo ſcrupulous, as he ſeemeth to be, in averring downrightly, That God cannot do contradictory things, (though peradventure it is not amiſs to ſweeten the manner of the expreſſion, and the ſound of the words) for who underſtandeth the nature of contradiction, will find *Non-Entity* in one of the terms, which of *God* were impiety not to deny peremptorily. For he being in his proper nature *Self-Entity*, all *Being* muſt immediately flow from him, and all *Not-being* be totally excluded from that Efflux. Now for the recalling of *Time* paſt, which the *Angels* poſed *Eſdras* withal; there is no contradiction in that, as is evident to them that know the eſſence of Time. For it is but putting again, all things that had motion, into the ſame ſtate they were in, at that moment unto which time was to be reduced

ced back, and from thence letting it travel on again by the same motion, and upon the same wheels it rouled upon before And therefore God could do this admirable Work, though neither *Esdras*, nor all the power of Creatures together could do it: And consequently it cannot in this Question be said, that he posed Mortality with what himself was not able to perform.

I acknowledge ingenuously, our *Physicians* experience hath the advantage of my *Philosophy*, in knowing there are Witches. Yet I am sure I have no temptation to doubt of the *Deity*; nor have any unsatisfaction in believing there are *Spirits*. I do not see such a necessary conjunction between them, as that the supposition of the one must needs infer the other. Neither do I deny there are Witches. I only reserve my Assent, till I meet with stronger motives to carry it. And I confess I doubt as much of the efficacy of those Magical Rules he speaketh of, as also of the finding out of Mysteries by the courteous *Revelation of Spirits*.

I doubt his Discourse of an *Universal Spirit*, is but a wild Fancy; and that in the marshalling of it, he mistaketh the *Hermetical Philosophers*. And surely, it is a weak argument from a common nature, that subsisteth only in our understanding (out of which it hath no Being at all) to infer by parity, an actual Subsistence of the like in reality of Nature (of which kind of miscarriage in mens discoursings, I have spoken before.) And upon this occasion, I do not see how seasonably he falleth of a sudden from natural Speculation, to a Moral Contemplation of *God's Spirit* working in us. In which also I would enquire (especially upon his sudden Poetical Rapture) whether the Solidity of the *Judgment* be not outweighed by the airiness of the Fancy. Assuredly one cannot err in taking this *Author* for a very fine ingenious *Gentleman:* But for how deep a *Scholar*, I leave unto them to judge, that are abler than I am.

If he had applied himself with earnest study, and upon right grounds, to search out the Nature of pure Intellects; I doubt not but his great Parts would have argued more efficaciously, than he doth against those, that between *Men* and *Angels*, put only *Porphyrie's* difference of *Mortality* and *Immortality*. And he would have dived further into the tenour of their Intellectual Operations; in which there is no Succession, nor ratiocinative Discourse; for in the very first instant of their Creation, they actually knew all that they were capable of knowing, and they are acquainted even with all free thoughts, past, present and to come; for they see them in their causes, and they see them all together at one instant; as I have in my fore-mentioned Treatise proved at large: And I think I have already touched thus much once before in this *Letter*.

I am tempted here to say a great deal concerning *Light*, by his taking it to be a bare Quality. For in *Physicks*, no Speculation is more useful, or reacheth further. But to set down such *Phænomena's* of it, as I have observed, and from whence I evidently collect the Nature of it, were too large a *Theam* for this place: When your Lordship pleaseth, I shall shew you another more orderly Discourse upon that Subject, wherein I have sufficiently proved it to be a solid Substance and Body.

In his proceeding to collect an Intellectual World, and in his discoursing upon the place and habitation of *Angels*; as also in his consideration of the activity of glorified Eyes, which shall be in the state of rest, whereas motion is required to seeing; and in his subtil Speculation upon two Bodies, placed in the Vacuity, beyond the utmost all enclosing Superficie of *Heaven* (which implieth a Contradiction in Nature) methinks I hear *Apelles* crying out, *Ne Sutor ultra Crepidam:* or rather, it putteth me in mind of one of the Titles in *Pantagruel's* Library, (which he expresseth himself conversant in) namely, *Quæstio subtilissima, utrum Chimæra in vacuo bombinans possit comedere secundas intentiones*; with which short Note I will leave these Considerations; in which, (if time, and other circumstances allowed it) matter would spring up of excellent *Learning*.

When our Author shall have read Mr. *White's* Dialogues of the *World*, he will no longer be of the Opinion, That the Unity of the World is a conclusion of Faith: For it is there demonstrated by *Reason*. Here

Here the thread of the Diſcourſe inviteth me to ſay a great deal of the Production or Creation of *Mans Soul*. But it is too tedious, and too knotty a piece for a *Letter*. Now it ſhall ſuffice to note, that it is not *Ex traduce*, and yet hath a ſtrange kind of near dependance on the Body, which is, as it were, Gods inſtrument to create it by. This, thus ſaid, or rather tumbled out, may ſeem harſh. But had your Lordſhip leiſure to peruſe what I have written at full upon this Point, I doubt not but it would appear plauſible enough to you.

I cannot agree with him, when he ſeemeth to impute Inconvenience to *long Life*, and that length of time doth rather impair, than improve us: For ſurely if we will follow the courſe of Nature, and of Reaſon, it is a mighty great bleſſing; were it but in this regard, that it giveth time leave to vent and boyl away the unquietneſſes and turbulencies that follow our paſſions, and to wean our ſelves gently from carnal affections, and at the laſt to drop with eaſe and willingneſs, like ripe fruit from the *Tree*; as I remember *Plotinus* finely diſcourſeth in one of his *Æneads*. For when before the ſeaſon, it is plucked off with violent hands, or ſhaken down by rude and boyſterous winds, it carrieth along with it an indigeſted raw taſt of the Wood, and hath an unpleaſant aigerneſs in its juice, that maketh it unfit for uſe, till long time hath mellowed it: And peradventure it may be ſo backward, as inſtead of ripening, it may grow rotten in the very *Center*. In like manner, *Souls* that go out of their *Bodies* with affection to thoſe Objects they leave behind them, (which uſually is as long as they can reliſh them) do retain ſtill even in their Separation, a byas, and a languiſhing towards them: which is the reaſon why ſuch terrene Souls appear oftenеſt in *Cœmeteries* and *Charnel-houſes*, and not that moral one, which our Author giveth. For Life, which is union with the Body, being that which carnal Souls have ſtraiteſt affection to, and that they are lotheſt to be ſeparated from; their unquiet *Spirit*, which can never (naturally) loſe the impreſſions it had wrought in it at the time of its driving out, lingreth perpetually after that dear Conſort of his. The impoſſibility cannot cure them of their impotent deſires; they would fain be alive again,

———Iterúmque ad tarda reverti
Corpora. Quæ lucis miſeris tam dira cupido?

And to this cauſe peradventure may be reduced the ſtrange effect, which is frequently ſeen in *England*, when at the approach of the *Murderer*, the ſlain body ſuddenly bleedeth afreſh. For certainly, the Souls of them that are treacherouſly murdered by ſurprize, uſe to leave their bodies with extream unwillingneſs, and with vehement indignation againſt them, that force them to ſo unprovided and abhorred a paſſage. That Soul then, to wreak its evil talent againſt the hated Murderer, and to draw a juſt and deſired revenge upon his head, would do all it can to manifeſt the Author of the fact. To ſpeak it cannot, for in it ſelf it wanteth *Organs* of voice; and thoſe it is parted from, are now grown too heavy, and are too benummed for it to give motion unto. Yet ſome change it deſireth to make in the body, which it hath ſo vehement inclinations to, and therefore is the apteſt for it to work upon: It muſt then endeavour to cauſe a motion in the ſubtileſt and moſt fluid parts (and conſequently, the moſt moveable ones) of it. This can be nothing but the Blood, which then being violently moved, muſt needs guſh out at thoſe places where it findeth Iſſues.

Our Author cannot believe, that the World will periſh upon the ruines of its own principles. But Mr. *White* hath demonſtrated the end of it upon natural Reaſon. And though the preciſe time for that general Deſtruction be inſcrutable; yet he learnedly ſheweth an ingenious Rule, whereby to meaſure in ſome ſort the duration of it, without being branded (as our Author threatneth) with convincible and *Statute*-madneſs, or with impiety. And whereas he will have the work of this laſt great Day (the Summer up of all paſt days) to imply annihilation, and thereupon intereſteth God only in

it: I must beg leave to contradict him, namely in this point; and to affirm, that the letting loose then of the activest Element, to destroy this Face of the World, will but beget a change in it; and that no annihilation can proceed from God Almighty: For his Essence being (as I said before) self-existence, it is more impossible that Not-being should flow from him, than that cold should flow immediately from fire, or darkness from the actual presence of light.

I must needs acknowledge, that where he ballanceth Life and Death against one another, and considereth that the latter is to be a kind of nothing for a moment, to become a pure *Spirit* within one instant, and what followeth of this strong thought, is extream handsomly said, and argueth very gallant and generous Resolutions in him.

To exemplifie the *Immortality of the Soul*, he needeth not have recourse to the *Philosopher*'s stone. His own store furnisheth him with a most pregnant one of reviving a Plant (the same numerical Plant), out of its own ashes. But under his favour, I believe his experiment will fail, if under the notion of the same, he comprehendeth all the Accidents that first accompanied that Plant; for since in the ashes there remaineth only the fixed Salt, I am very confident, that all the colour, and much of the odour and taste of it, is flown away with the Volatile Salt.

What should I say of his making so particular a Narration of personal things, and private thoughts of his own; the knowledge whereof cannot much conduce to any mans betterment? (which I make account is the chief end of his writing this Discourse) As where he speaketh of the soundness of his Body, of the course of his Diet, of the coolness of his Bloud at the Summer-Solstice of his age, of his neglect of an *Epitaph*; how long he hath lived, or may live; what *Popes*, *Emperours*, *Kings*, *Grand Seigniors*, he hath been Contemporary unto, and the like: Would it not be thought that he hath a special good opinion of himself, (and indeed he hath reason) when he maketh such great Princes the Land-marks in the Chronology of himself? Surely if he were to write by retail the particulars of his own Story and Life, it would be a notable *Romance*, since he telleth us in one total Summ, it is a continued Miracle of thirty years. Though he creepeth gently upon us at the first, yet he groweth a *Giant*, an *Atlas* (to use his own expression) at the last. But I will not censure him, as he that made Notes upon *Balsac*'s Letters, and was angry with him for vexing his Readers with Stories of his *Colicks*, and voiding of Gravel: I leave this kind of his expressions, without looking further into them.

In the next place (my *Lord*) I shall take occasion from our Author's setting so main a difference between moral Honesty and Vertue, or being vertuous (to use his own phrase) out of an inbred loyalty to Vertue; and on the other side, being vertuous for a rewards sake; to discourse a little concerning *Vertue* in this life, and the effects of it afterwards. Truly (my *Lord*) however he seemeth to prefer this latter, I cannot but value the other much before it, if we regard the nobleness and heroickness of the nature and mind from whence they both proceed: And if we consider the Journeys end, to which each of them carrieth us, I am confident the first yieldeth nothing to the second, but indeed both meet in the period of Beatitude. To clear this point (which is very well worth the wisest mans seriousest thoughts) we must consider, what it is that bringeth us to this excellent State, to be happy in the other world of Eternity and Immutability. It is agreed on all hands to be God's Grace and Favour to us: But all do not agree by what steps his grace produceth this effect. Herein I shall not trouble your Lordship with a long Discourse, how that Grace worketh in us, (which yet I will in a word touch anon, that you may conceive what I understand Grace to be) but will suppose it to have wrought its effect in us in this life, and from thence examine what hinges they are that turn us over to *Beatitude* and *Glory* in the next. Some consider God as a Judge, that rewardeth or punisheth men, according as they co operated with, or repugned to, the grace he gave. That according as their actions please or displease him, he is well affected

affected towards them, or angry with them; and accordingly maketh them, to the purpoſe, and very home, feel the effects of his kindneſs or indignation. Others that flie a higher pitch, and are ſo happy,

——*Ut rerum poterint cognoſcere cauſas,*

do conceive that Beatitude and miſery in the other life, are effects that neceſſarily and orderly flow out of the Nature of thoſe Cauſes that begot them in this life, without engaging God Almighty to give a Sentence, and act the part of a Judge, according to the ſtate of our Cauſe, as it ſhall appear upon the Accuſations and pleadings at his great *Bar.* Much of which manner of expreſſion, is Metaphorical, and rather adapted to contain vulgar minds in their Duties (that are awed with the thought of a ſevere Judge, ſifting every minute action of theirs) than ſuch as we muſt conceive every circumſtance to paſs ſo in reality, as the literal ſound of the words ſeems to infer in ordinary conſtruction: (and yet all that is true too, in its genuine ſence.) But, my *Lord*, theſe more penetrating men, and that, I conceive, are vertuous upon higher and ſtronger Motives (for they truly and ſolidly know, why they are ſo) do conſider, that what impreſſions are once made in the ſpiritual Subſtance of a Soul, and what affections it hath once contracted, do ever remain in it, till a contrary and diametrally contradicting judgment and affection, do obliterate it, and expell it thence. This is the reaſon why *Contrition*, *Sorrow*, and *Hatred* for *Sins* paſt, is encharged us. If then the *Soul* do go out of the Body with impreſſions and affections to the objects and pleaſures of this life, it continually lingreth after them, and as *Virgil* (learnedly, as well as wittily) ſaith,

——*Quæ gratia currûm,*
Armorumque fuit vivis, quæ cura nitentes
Paſcere equos, eadem ſequitur tellure repoſtos.

But that being a State wherein thoſe Objects neither are, nor can be enjoyed, it muſt needs follow, that ſuch a Soul muſt be in an exceeding anguiſh, ſorrow and affliction, for being deprived of them; and for want of that it ſo much prizeth, will neglect all other contentments it might have, as not having a reliſh or taſte moulded and prepared to the ſavouring of them; but like feavoriſh tongues, that when they are even ſcorched with heat, take no delight in the pleaſingeſt liquors, but the ſweeteſt drinks ſeem bitter to them, by reaſon of their overflowing Gall: So they even hate whatſoever good is in their power, and thus pine away a long Eternity. In which the ſharpneſs and activity of their pain, anguiſh, and ſad condition, is to be meaſured by the ſenſibleneſs of their Natures: which being then purely ſpiritual is in a manner infinitely more than any torment that in this life can be inflicted upon a dull groſs body. To this add, the vexation it muſt be to them, to ſee how ineſtimable and infinite a good they have loſt; and loſt meerly by their own fault, and for momentany trifles, and childrens play; and that it was ſo eaſie for them to have gained it, had they remained but in their right ſenſes, and governed themſelves according unto *Reaſon.* And then judge in what a tortured condition they muſt be, of remorſe and execrating themſelves for their moſt reſupine and ſenſleſs madneſs. But if on the other ſide, a Soul be releaſed out of this *Priſon* of clay and fleſh, with affections ſettled upon Intellectual goods, as *Truth*, *Knowledge*, and the like; and that it be grown to an irkſom diſlike of the flat pleaſures of this World; and look upon carnal and ſenſual Objects with a diſdainful eye, as diſcerning the contemptible Inanity in them, that is ſet off only by their painted outſide; and above all, that it have a longing deſire to be in the Society of that ſupereminent Cauſe of Cauſes, in which they know are heaped up the *Treaſures* of all *Beauty*, *Knowledge*, *Truth*, *Delight*, and good whatſoever; and therefore are impatient at the *Delay*, and reckon all their Abſence from him, as a tedious Baniſhment; and in that regard hate their Life and Body, as

cause of this Divorce: such a Soul, I say, must necessarily, by reason of the temper it is wrought into, enjoy immediately at the instant of the Bodies dissolution, and its liberty, more Contentment, more Joy, more true Happiness, than it is possible for a heart of flesh to have scarce any scantling of, much less to comprehend.

For immense Knowledge is natural to it, as I have touched before. *Truth* which is the adequated and satisfying Object of the Understanding, is there displayed in her own Colours, or rather without any.

And that which is the *Crown* of all, and in respect of which all the rest is nothing; that infinite Entity, which above all things this Soul thirsteth to be united unto, cannot for his own Goodness sake deny his Embraces to so affectionate a *Creature*, and to such an enflamed Love. If he should, then were that Soul, for being the best, and for loving him most, condemned to be the unhappiest. For what Joy could she have in any thing, were she barred from what she so infinitely loveth? But since the Nature of superiour and excellent things is to showre down their propitious Influences, whereseoever there is a Capacity of receiving them, and no Obstacle to keep them out (like the Sun that illuminateth the whole Air, if no Cloud, or solid opacous Body intervene) it followeth clearly, that this infinite Sun of Justice, this immense Ocean of goodness, cannot chuse but inviron with his Beams, and repleniſh even beyond Satiety with his delightsom Waters, a soul so prepared and tempered to receive them.

Now (my *Lord*) to make use of this Discourse, and apply it to what begot it; be pleased to determine, which way will deliver us eveneſt and smootheſt to this happy end of our *Journey*: To be vertuous for hope of a Reward, and through fear of Punishment; or to be so out of a natural and inward affection to *Vertue*, for *Vertues* and *Reasons* sake? Surely one in this latter condition, not only doth those things which will bring him to *Beatitude*; but he is so secured, in a manner, under an Armour of *Proof*, that he is almost invulnerable; he can scarce miscarry, he hath not so much as an inclination to work contrarily; the Alluring Baits of this *World* tempt him not; he disliketh, he hateth, even his necessary Commerce with them whilst he liveth. On the other side, the Hireling that steereth his course only by his Reward and Punishment, doth well, I confess; but he doth it with Reluctance; he carrieth the *Ark*, Gods Image, his Soul, safely home, it is true, but he loweth pitifully after his Calves, that he leaveth behind him among the *Philistines*. In a word, he is *vertuous*; but if he might safely, he would do *vitious* things. (And hence be the ground in Nature, if so I might say, of our *Purgatory*.) Methinks two such Minds may not unfitly be compared to two Maids, whereof one hath a little sprinkling of the Green Sickness, and hath more mind to *Ashes*, *Chalk* or *Leather*, than meats of solid and good nourishment, but forbeareth them, knowing the languishing condition of *Health* it will bring her to; But the other having a ruddy, vigorous and perfect Constitution, and enjoying a compleat, entire *Eucrasie*, delights in no food but of good nouriture, and loaths the others Delights. *Her Health* is discovered in her looks, and she is secure from any danger of that Malady, whereas the other for all her good Diet, beareth in her Complexion some sickly Testimony of her depraved Appetite; and if she be not very *wary*, she is in danger of a relapse.

It falleth fit in this place to examine our Author's apprehension of the end of such honest *Worthies* and *Philosophers* (as he calleth them) that died before *Christ* his Incarnation, Whether any of them could be saved, or no? Truly, my *Lord*, I make no doubt at all, but if any followed in the whole *Tenor* of their lives, the Dictamens of right *Reason*, that their journey was secure to *Heaven*. Out of the former Discourse appeareth what temper of mind is necessary to get thither. *And*, that *Reason* would dictate such a temper to a pefectly judicious man, (though but in the state of *Nature*) as the best and most rational for him, I make no doubt at all. But it is most true, they are exceeding few (if any) in whom *Reason* worketh clearly, and is not overswayed by *Passion* and terrene *Affections*, they are few that can discern what is reasonable to be done in every Circumstance. —*Pauci*

——Pauci quos æquus amavit
Jupiter, aut ardens evexit ad æthera virtus,
Diis geniti, potuere.——

And fewer, that knowing what is beſt, can win of themſelves to do accordingly; (*Video meliora proboque, Deteriora ſequor*, being moſt mens caſes) ſo that after all that can be expected at the hands of Nature and Reaſon in their beſt Habit, ſince the lapſe of them, we may conclude it would have been a moſt difficult thing for any man, and a moſt impoſſible one for mankind, to attain unto *Beatitude*, if *Chriſt* had not come to teach, and by his example to ſhew us the way.

And this was the *Reaſon* of his Incarnation, teaching Life and Death: For being God, we could not doubt his Veracity, when he told us news of the other world; having all things in his power, and yet injoying none of the Delights of this Life, no man ſhould ſtick at foregoing them, ſince his Example ſheweth all men, that ſuch a courſe is beſt; whereas few are capable of the *Reaſon* of it: And for his laſt Act, dying in ſuch an afflicted manner; he taught us how the ſecureſt way to ſtep immediately into perfect Happineſs, is to be crucified to all the Deſires, Delights and Contentments of this *World*.

But to come back to our *Phyſician*: Truly (my *Lord*) I muſt needs pay him, as a due, the acknowledging his pious Diſcourſes to be Excellent and Pathetical ones, containing worthy Motives to incite one to Vertue, and to deterr one from Vice; thereby to gain *Heaven*, and to avoid *Hell*. Aſſuredly he is owner of a ſolid Head and of a ſtrong generous Heart. Where he imployeth his thoughts upon ſuch things as reſort to no higher, or more abſtruſe *Principles*, than ſuch as occurr in ordinary Converſation with the World, or in the common Tract of Study and Learning; I know no man would ſay better. But when he meeteth with ſuch difficulties as his next, concerning the *Reſurrection of the body*, (wherein after deep Meditation upon the moſt abſtracted Principles and Speculations of the *Metaphyſicks*, one hath much ado to ſolve the appearing Contradictions in *Nature*) *There*, I do not at all wonder, he ſhould tread a little awry, and go aſtray in the dark, for I conceive his courſe of life hath not permitted him to allow much time unto the unwinding of ſuch entangled and abſtracted Subtilties. But if it had, I believe his Natural parts are ſuch, as he might have kept the Chair from moſt men I know: For even where he roveth wideſt, it is with ſo much wit and ſharpneſs, as putteth me in mind of a great mans Cenſure upon *Joſeph Scaliger*'s *Cyclometrica*, (a matter he was not well verſed in) That he had rather err ſo ingeniouſly as he did, than hit upon *Truth* in that heavy manner, as the *Jeſuit* his *Antagoniſt* ſtuffeth his *Books*. Moſt aſſuredly his wit and ſmartneſs in this Diſcourſe, is of the fineſt *Standard*, and his inſight into ſeverer *Learning*, will appear as piercing unto ſuch as uſe not ſtrictly the *Touchſtone* and the *Teſt*, to examine every piece of the glittering Coyn he payeth his Reader with. But to come to the *Reſurrection*. Methinks it is but a groſs Conception, to think that every *Atome* of the preſent individual Matter of a Body, every grain of *Aſhes* of a burned *Cadaver*, ſcattered by the Wind throughout the World, and after numerous Variations, changed peradventure into the body of another man, ſhould at the ſounding of the laſt *Trumpet* be raked together again from all the corners of the Earth, and be made up a new into the ſame *Body* it was before of the firſt Man. Yet if we will be *Chriſtians* and relie upon Gods Promiſes, we muſt believe that we ſhall riſe again with the ſame Body that walked about, did eat, drink, and live here on Earth; and that we ſhall ſee our *Saviour* and *Redeemer*, with the ſame, the very ſame eyes, wherewith we now look upon the fading *Glories* of this contemptible world.

How ſhall theſe ſeeming Contrarieties be reconciled? If the latter be true, why ſhould not the former be admitted? To explicate this Riddle the better, give me leave to ask your Lordſhip, if you now ſee the

Cannons, the *Enſigns*, the *Arms*, and other Martial Preparations at *Oxford*, with the ſame Eyes, wherewith many years agone you looked upon *Porphyry*'s and *Ariſtotle*'s learned leaſes there? I doubt not but you will anſwer me, aſſuredly with the very ſame. Is that *Noble* and *Graceful Perſon* of yours, that begetteth both *Delight* and *Reverence* in every one that looketh upon it? Is that Body of yours, that now is grown to ſuch comely and full Dimenſions, as *Nature* can give her none more advantagious; the ſame Perſon, the ſame Body, which your Vertuous and Excellent Mother bore nine Months in her Chaſte and Honoured Womb, and that your Nurſe gave ſuck unto? Moſt certainly it is the ſame. And yet if you conſider it well, it cannot be doubted, but that ſublunary matter, being in a perpetual flux, and in Bodies which have internal Principles of Heat and Motion, much continually tranſpiring out to make room for the ſupply of new Aliment; at the length, in long proceſs of time, all is ſo changed, as that *Ship* at *Athens* may as well be called the ſame Ship that was there two hundred years before, and whereof (by reaſon of the continual reparations) not one foot of the *Timber* is remaining in her that builded her at firſt, as this *Body* now can be called the ſame, was forty years agone, unleſs ſome higher conſideration keep up the *Identity* of it. Now what that is, let us examine, and whether or no it will reach to our difficulty of the *Reſurrection*. Let us conſider then, how that which giveth the Numerical Individuation to a *Body*, is the Subſtantial Form. As long as that remaineth the ſame, though the Matter be in a continual Flux and Motion, yet the Thing is ſtill the ſame. There is not one drop of the ſame Water in the *Thames*, that ran down by *White-Hall* yeſternight; yet no man will deny, but that it is the ſame River that was in Queen *Elizabeth*'s time, as long as it is ſupplied from the ſame Common Stock, the *Sea*. Though this Example reacheth not home, it illuſtrateth the thing. If then the Form remain abſolutely the ſame after ſeparation from the Matter, that it was in the Matter, (which can happen only to Forms, that ſubſiſt by themſelves, as humane *Souls*) it followeth then that whenſoever it is united to Matter again, (all matter coming out of the ſame Common Magazine) it maketh again the ſame Man, with the ſame Eyes, and all the ſame Limbs that were formerly. Nay, he is compoſed of the ſame Individual Matter, for it hath the ſame Diſtinguiſher and Individuator, to wit, the ſame Form or *Soul*. Matter conſidered ſingly by it ſelf hath no diſtinction: All matter is in it ſelf the ſame; we muſt fanſie it as we do the indigeſted *Chaos*, it is an uniformly wide *Ocean*. Particularize a few drops of the *Sea* by filling a Glaſs-full of them, then that Glaſs-full is diſtinguiſhed from all the reſt of the watery *Bulk*: But return back thoſe few drops from whence they were taken, and the Glaſs-full that even now had an Individuation by it ſelf, loſeth that, and groweth one and the ſame with the other main Stock: Yet if you fill your Glaſs again, whereſoever you take it up, ſo it be of the ſame Uniform *Bulk* of Water you had before, it is the ſame Glaſs-full of Water that you had. But as I ſaid before, this Example fitteth entirely, no more than the other did. In ſuch abſtracted Speculations, where we muſt conſider Matter without Form (which hath no actual Being) we muſt not expect adequated Examples in Nature. But enough is ſaid to make a Speculative man ſee, that if *God* ſhould joyn the *Soul* of a lately dead man, (even whileſt his dead Corps ſhould lie entire in his winding ſheet here) unto a body made of Earth, taken from ſome Mountain in *America*; it were moſt true and certain, that the body he then ſhould live by, were the ſame Identical Body he lived with before his *Death*, and late *Reſurrection*. It is evident, that *Sameneſs*, *Thiſneſs*, and *Thatneſs*, belongeth not to Matter by it ſelf, (for a general Indifference runneth through it all) but only as it is diſtinguiſhed and individuated by the Form. Which in our caſe, whenſoever the ſame *Soul* doth, it muſt be underſtood always to be the ſame matter and Body.

This Point thus paſſed over, I may peece to it what our *Author* ſaith, of a *Magazine* of ſubſiſtent Forms reſiding firſt in the *Chaos*, and hereafter (when the World ſhall have been deſtroyed by fire) in the general heap of *Aſhes*:

Aſhes: out of which Gods Voice did, and ſhall draw them out, and clothe them with Matter. This Language were handſome for a *Poet*, or a *Rhetorician* to ſpeak; but in a *Philoſopher*, that ſhould ratiocinate ſtrictly and rigorouſly, I cannot admit it. For certainly, there are no ſubſiſtent Forms of *Corporeal* things; (excepting the *Soul* of man, which beſides being an Informing Form, hath another particular Conſideration belonging to it, too long to ſpeak of here.) But whenſoever that Compound is deſtroyed, the Form periſheth with the whole. And for the Natural Production of *Corporeal* things, I conceive it to be wrought out by the Action and Paſſion of the *Elements* among themſelves; which introducing new Tempers and Diſpoſitions, into the Bodies where theſe Conflicts paſs; new Forms ſucceed old ones, when the Diſpoſitions are raiſed to ſuch a height, as can no longer conſiſt with the preceding Form, and are in the immediate Degree to fit the ſucceeding one, which they uſher in. The Myſtery of all which I have at large unfolded in my above-mentioned Treatiſe of the *Immortality of the Soul*.

I ſhall ſay no more to the firſt part of our *Phyſician*'s Diſcourſe, after I have obſerved, how his Conſequence is no good one where he inferreth That if the *Devils* fore-knew, who would be Damned or Saved, it would ſave them the *Labour*, and end their work of tempting Mankind to miſchief and evil. For whatſoever their Moral Deſign and Succeſs be in it, their Nature impelleth them to be always doing it. For as on the one ſide, it is Active in the higheſt Degree, (as being pure *Acts*, that is, *Spirits*,) ſo on the other ſide, they are Malign in as great an Exceſs: By the one they muſt be always working, whereſoever they may work, (like Water in a Veſſel full of holes, that will run out of every one of them which is not ſtopped:) By the other, their whole Work muſt be malicious and miſchievous. Joyning then both theſe Qualities together, it is evident, they will always be tempting mankind, though they know they ſhall be fruſtrate of their Moral End.

But were it not time that I made an end? Yes, it is more than time. And therefore having once paſſed the limit that confined what was becoming, the next ſtep carryed me into the *Ocean* of *Errour*; which being infinite, and therefore more or leſs bearing no proportion in it; I will proceed a little further, to take a ſhort Survey of his *Second Part*, and hope for as eaſie *Pardon* after this Addition, to my ſudden and indigeſted Remarks, as if I had encloſed them up now.

Methinks, he beginneth with ſomewhat an affected Diſcourſe, to prove his natural Inclination to *Charity*; which *Vertue* is the intended *Theme* of all the Remainder of his Diſcourſe. And I doubt he miſtaketh the loweſt *Orbe* or *Lembe* of that high *Seraphick Vertue*, for the top and perfection of it; and maketh a kind of humane Compaſſion to be *Divine Charity*. He will have it to be a general way of doing good: It is true, he addeth then, *for Gods ſake*; but he allayeth that again, with ſaying he will have that good done, as by Obedience, and to accompliſh Gods will; and looketh at the Effects it worketh upon our Souls, but in a narrow compaſs; like one in the vulgar throng, that conſidereth God as a Judge, and as a Rewarder or a Puniſher. *Whereas* perfect *Charity*, is that vehement Love of God for his own ſake, for his Goodneſs, for his Beauty, for his Excellency, that carrieth all the motions of our Soul directly and violently to Him; and maketh a man diſdain, or rather hate all obſtacles that may retard his journey to Him. And that Face of it that looketh toward Mankind with whom we live, and warmeth us to do others good, is but like the over-flowing of the main Stream, that ſwelling above its Banks runneth over in a multitude of little chanels.

I am not ſatisfied, that in the Likeneſs which he putteth between *God* and *Man*, he maketh the difference between them, to be but ſuch as between two Creatures that reſemble one another. For between theſe, there is ſome proportion; but between the others, none at all. In the examining of which Diſcourſe, wherein the *Author* obſerveth, that no two

Faces

Faces are ever seen to be perfectly alike, nay, no two *Pictures* of the same Face, were ever exactly made so; I could take occasion to insert a subtil and delightful Demonstration of Mr. *White*'s, wherein he sheweth, how it is impossible that two Bodies (for example, two *Bouls*) should ever be made exactly like one another; nay, not rigorously equal in any one Accident, as namely in weight, but that still there will be some little difference and inequality between them (the *Reason* of which Observation, our *Author* medleth not with) were it not that I have been so long already, as Digressions were now very unseasonable.

Shall I commend or censure our *Author* for believing so well of his acquired knowledg, as to be dejected at the thought of not being able to leave it a Legacy among his Friends? Or shall I examine whether it be not a high injury to wise and gallant *Princes*, who out of the generousness and nobleness of their *Nature*, do patronize Arts and learned Men, to impute their so doing to vanity of desiring praise, or to fear of Reproach.

But let these pass: I will not engage any that may be-friend him, in a quarrel against him. But I may safely produce *Epictetus* to contradict him, when he letteth his kindness engulf him in deep afflictions for a friend: For he will not allow his wise man to have an inward relenting, a troubled feeling, or compassion of anothers misfortunes. That disordereth the one, without any good to the other. Let him afford all the assistances and relievings in his power, but without intermingling himself in the others *Woe*; As *Angels*, that do us good, but have no passion for us. But this Gentleman's kindness goeth yet further: he compareth his love of a *Friend* to his love of *God*; the Union of Friends souls by affection, to the Union of the three Persons in the *Trinity*, and to the *Hypostatical Union* of two Natures in one *Christ*, by the Words *Incarnation*. Most certainly he expresseth himself to be a right good-natur'd man. But if St. *Augustine* retracted so severely his pathetical Expressions for the Death of his Friend, saying, *They savoured more of the Rhetorical Declamations of a young Orator, than of the grave Confession of a devout Christian*, (or somewhat to that purpose) What censure upon himself may we expect of our *Physician*, if ever he make any Retractation of this Discourse concerning his *Religion*.

It is no small misfortune to him, that after so much time spent, and so many places visited in a curious Search, by travelling after the Acquisition of so many Languages; after the wading so deep in Sciences, as appeareth by the ample Inventory, and Particular he maketh of himself: The result of all this should be to profess ingenuously he had studied enough, only to become a *Sceptick*; and that having run through all sorts of *Learning*, he could find rest and satisfaction in none. This, I confess, is the unlucky fate of those that light upon wrong *Principles*: But Mr. *White* teacheth us, how the *Theorems* and *Demonstrations* of *Physicks* may be linked and chained together, as strongly, and as continuedly, as they are in the *Mathematicks*, if men would but apply themselves to a right Method of Study. And I do not find that *Solomon* complained of Ignorance in the height of Knowledge; (as this *Gentleman* saith) but only, that after he hath rather acknowledged himself ignorant of nothing, but that he understood the Natures of all Plants, from the *Cedar* to the *Hyssop*, and was acquainted with all the ways and paths of Wisdom and Knowledge, he exclaimeth, that all this is but *Toyl and vexation of Spirit*; and therefore adviseth men, to change humane Studies into Divine Contemplations and Affections.

I cannot agree to his resolution of shutting his *Books*, and giving over the search of Knowledg, and resigning himself up to Ignorance, upon the reason that moveth him; as though it were extream *Vanity* to waste our days in the pursuit of that, which by attending but a little longer, (till Death hath closed the eyes of our Body, to open those of our *Soul*) we shall gain with ease, we shall enjoy by infusion, and is an accessory of our Glorification. It is true, as soon as *Death* hath played the Midwife to our second Birth, our Soul shall then see all Truths more freely, than our Corporal Eyes at our first Birth see all Bodies and Colours, by the natural power of it, as I have touched

touched already, and not only upon the grounds our *Author* giveth. Yet far be it from us, to think that time loſt, which in the mean ſeaſon we ſhall laborioufly imploy, to warm our ſelves with blowing a few little *Sparks* of that glorious fire, which we ſhall afterwards in one inſtant leap into the middle of, without danger of Scorching. And that for two important *Reaſons*; (beſides ſeveral others, too long to mention here) the one, for the great advantage we have by Learning in this life; the other, for the huge Contentment that the Acquiſition of it here (which applyeth a ſtrong affection to it) will be unto us in the next life. The want of Knowledg in our firſt Mother (which expoſed her to be eaſily deceived by the *Serpents* cunning) was the root of all our enſuing *Miſery* and *Woe*. It is as true (which we are taught by irrefragable Authority) That *Omnis peccans ignorat*: And the Well-head of all the calamities and miſchiefs in all the World conſiſteth of the troubled and bitter waters of Ignorance, Folly and Raſhneſs; to cure which, the only Remedy and Antidote, is the ſalt of true *Learning*, the bitter *Wood* of *Study*, painful *Meditation* and orderly *Conſideration*. I do not mean ſuch *Study*, as armeth wrangling *Champions* for clamorous *Schools*, where the Ability of ſubtil Diſputing to and fro, is more prized than the retriving of Truth: But ſuch as filleth the mind with ſolid and uſeful notions, and doth not endanger the ſwelling it up with windy vanities. Beſides, the ſweeteſt Companion and entertainment of a well-temper'd mind, is to converſe familiarly with the naked and bewitching beauties of thoſe Miſtreſſes, thoſe Verities and Sciences, which by fair courting of them, they gain and enjoy; and every day bring new freſh ones to their *Seraglio*, where the ancienteſt never grow old or ſtale. Is there any thing ſo pleaſing, or ſo profitable as this?

——— Nil dulcius eſt, bene quam munita tenere
Edita Doctrina ſapientum templa ſerena;
Deſpicere unde queas alios, paſſimque videre
Errare, atque viam palantes quærere vitæ.

But now if we conſider the advantage we ſhall have in the other life by our affection to *Sciences*, and converſation with them in this, it is wonderful great. Indeed that affection is ſo neceſſary, as without it we ſhall enjoy little contentment in all the knowledge we ſhall then be repleniſhed with: for every ones pleaſure in the poſſeſſion of a good, is to be meaſured by his precedent *Deſire* of that good, and by the equality of the taſte and reliſh of him that feedeth upon it. We ſhould therefore prepare and make our taſte before-hand by Aſſuefaction unto, and by often reliſhing what we ſhall then be nouriſhed with. That *Engliſhman* that can drink nothing but *Beer* or *Ale*, would be ill beſtead, were he to go into *Spain* or *Italy*, where nothing but *Wine* groweth: whereas a well experienced *Goinfre*, that can criticize upon the ſeveral taſtes of Liquors, would think his *Palate* in *Paradiſe*, among thoſe delicious *Nectars* (to uſe *Aretine*'s phraſe upon his eating of a *Lamprey*.) Who was ever delighted with *Tabaco* the firſt time he took it? And who could willingly be without it, after he was a while habituated to the uſe of it? How many examples are there daily of young men that marrying upon their Fathers command, not through precedent affections of their own, have little comfort in worthy and handſome Wives, that others would paſſionately affect; *Archimedes* loſt his life, for being ſo raviſhed with the delight of a Mathematical Demonſtration, that he could not of a ſudden recal his ecſtaſied *Spirits* to attend the rude Souldiers Summons: But inſtead of him, whoſe mind had been always fed with ſuch ſubtle *Diet*, how many plain *Country Gentlemen* doth your Lordſhip and I know, that rate the knowledge of their Husbandry at a much higher pitch; and are extreamly delighted by converſing with that; whereas the other would be moſt tedious and importune to them? We may then ſafely conclude, That if we will joy in the *Knowledge* we ſhall have after *Death*, we muſt in our life-time raiſe within our ſelves earneſt affections to it, and deſires of

it,

it, which cannot be barren ones; but will press upon us to gain some Knowledg by way of advance here; and the more we attain unto, the more we shall be in *Love* with what remaineth behind. To this reason then adding the other, How knowledg is the surest prop, and guide of our present life; and how it perfecteth a man in that which constituteth him a man, his *Reason*; and how it enableth him to tread boldly, steadily, constantly, and knowingly in all his ways: And I am confident, all men that shall hear the Case thus debated, will joyn with me in making it a Suit to our *Physician*, that he will keep his *Books* open, and continue that *Progress* he hath so happily begun.

But I believe your Lordship will scarcely joyn with him in his wish, that we might procreate and beget Children without the help of Women, or without any Conjunction or Commerce with that sweet and bewitching *Sex*. *Plato* taxeth his fellow *Philosopher* (though otherwise a learned and brave man) for not sacrificing to the *Graces*, those gentle Female *Goddesses*. What thinketh your Lordship of our *Physician*'s bitter censure of that action, which *Mahomet* maketh the Essence of his *Paradise*? Indeed, besides those his unkindnesses, or rather frowardnesses, at that tender-hearted *Sex* (which must needs take it ill at his hands) methinketh he setteth Marriage at too low a rate, which is assuredly the highest and divinest link of humane Society. And where he speaketh of *Cupid*, and of *Beauty*, it is in such a phrase, as putteth me in mind of the Learned *Greek Reader* in *Cambridg* his courting of his *Mistress* out of *Stephens* his *Thesaurus*.

My next Observation upon his Discourse, draweth me to a *Logical* consideration of the Nature of an exact *Syllogism*: which kind of reflection, though it use to open the door in the course of Learning and Study; yet it will near shut it in my Discourse, which my following the thred that my *Author* spinneth, assigneth to this place. If he had well and throughly considered all that is required to that strict way of managing our *Reason*, he would not have censured *Aristotle* for condemning the fourth Figure, out of no other motive, but because it was not consonant to his own Principles; that it would not fit with the Foundations himself had laid; though it do with Reason (saith he) and be consonant to that, which indeed it doth not, at all times, and in all Circumstances. In a perfect *Syllogism*, the Predicate must be identified with the Subject, and each extream with the middle term, and so consequently, all three with one another. But in *Galen*'s fourth Figure, the case may so fall out, as these Rules will not be current there.

As for the good and excellency that he considereth in the worst things, and how far from Solitude any man is in a Wilderness; *These are* (in his Discourse) but *equivocal considerations of Good*, and of *Loneliness*. Nor are they any ways pertinent to the Morality of that part, where he treateth of them.

I have much ado to believe, what he speaketh confidently, That he is more beholding to *Morpheus*, for Learned and Rational, as well as pleasing *Dreams*, than to *Mercury* for smart and facetious Conceptions; whom *Saturn* (it seemeth by his relation) hath looked asquint upon in his Geniture.

In his concluding *Prayer*, wherein he summeth up all he wisheth; methinketh his Arrow is not winged with that fire, which I should have expected from him upon this occasion: For it is not the peace of *Conscience*, nor the bridling up of ones affections, that expresseth the highest delightfulness and happiest state of a perfect *Christian*. It is Love only that can give us *Heaven* upon Earth, as well as in Heaven; and bringeth us thither too: So that the *Thuscan Virgil* had reason to say,

—— In alte dolcezze
Non si puo gioir, se non amando.

And this Love must be imployed upon the noblest and highest Object, not terminated in our Friends. But of this transcendent and divine part of

Charity,

Charity, that looketh directly and immediately upon God himself; and that is the intrinsecal Form, the utmost Perfection, the scope and final period of true *Religion*, (this Gentleman's intended *Theam*, as I conceive) I have no occasion to speak any thing, since my *Author* doth but transiently mention it; and that too, in such a phrase as ordinary *Catechisms* speak of it to vulgar Capacities.

Thus, my Lord, having run through the Book (God knows how slightly, upon so great a sudden) which your Lordship commanded me to give you an account of, there remaineth yet a weightier task upon me to perform; which is, to excuse my self of Presumption for daring to consider any Moles in that Face, which you had marked for a Beauty. But who shall well consider my manner of proceeding in these Remarks, will free me from that Censure. I offer not at *judging* the Prudence and Wisdom of this Discourse: Those are fit Inquiries for your Lordship's Court of highest Appeal: In my inferiour one, I meddle only with little knotty pieces of particular Sciences (*Matinæ apis instar, operosa parvus carmina fingo*) In which it were peradventure a fault for your Lordship to be too well versed; your Imployments are of a higher and nobler *Strain*, and that concerns the welfare of millions of men:

Tu regere Imperio Populos (Sackville) memento
(Hæ tibi erunt Artes) pacísque imponere morem.

Such little Studies as these, belong only to those persons that are low in the rank they hold in the Commonwealth, low in their Conceptions, and low in a languishing and rusting leisure, such an one as *Virgil* calleth *Ignobile otium*, and such an one as I am now dulled withall. If *Alexander* or *Cæsar* should have commended a tract of Land, as fit to fight a Battel in for the Empire of the World, or to build a City upon; to be the *Magazine* and Staple of all the adjacent Countries; no body could justly condemn that Husbandman, who according to his own narrow Art and Rules, should censure the Plains of *Arbela*, or *Pharsalia*, for being in some places sterile; or the Meadows about *Alexandria*, for being sometimes subject to be overflown; or could tax ought he should say in that kind for a contradiction unto the others commendations of those places, which are built upon higher and larger Principles.

So (my Lord) I am confident I shall not be reproached of unmannerliness for putting in a Demurrer unto a few little particularities in that noble Discourse, which your Lordship gave a general Applause unto; and by doing so, I have given your Lordship the best Account I can of my self, as well as of your Commands. You hereby see what my entertainments are, and how I play away my time.

——Dorset *dum magnus ad altum*
Fulminat Oxonium bello, victórque volentes
Per populos dat jura; viámque affectat Olympo.

May your Counsels there be happy and successful ones, to bring about that *Peace*, which if we be not quickly blessed withall, a general ruine threatneth the whole *Kingdom*.

From *Winchester*-house the 22 (I think I may say the 23, for I am sure it is Morning, and I think it is Day) of *December*, 1642.

Your Lordship's most humble

and obedient Servant,

KENELM DIGBY.

The

The Postscript.

My Lord,

LOoking over these loose Papers to point them, I perceive I have forgotten what I promised in the eighth sheet, to touch in a word concerning Grace: *I do not conceive it to be a Quality infused by* God Almighty *into a Soul.*

Such kind of discoursing satisfieth me no more in Divinity, *than in* Philosophy. *I take it to be the whole Complex of such real motives (as a solid account may be given of them) that incline a man to Virtue and Piety; and are set on foot by Gods particular* Grace *and* Favour, *to bring that Work to pass. As for Example: To a man plunged in* Sensuality, *some great misfortune happeneth, that mouldeth his heart to a tenderness, and inclineth him to much thoughtfulness: In this temper, he meeteth with a* Book *or* Preacher, *that representeth lively to him the danger of his own condition; and giveth him hopes of greater contentment in other Objects, after he shall have taken leave of his former beloved* Sins. *This begetteth further conversation with prudent and pious men, and experienced* Physicians, *in curing the* Souls Maladies; *whereby he is at last perfectly converted, and settled in a course of solid* Vertue *and* Piety.

Now these accidents of his misfortune, the gentleness and softness of his Nature, his falling upon a good Book, *his encountring with a pathetick* Preacher, *the impremeditated Chance that brought him to hear his* Sermon, *his meeting with other worthy men, and the whole Concatenation of all the intervening Accidents, to work this good effect in him; and that were ranged and disposed from all Eternity, by* God's *particular goodness and providence for his* Salvation; *and without which he had inevitably been damned: This Chain of Causes, ordered by* God *to produce this effect, I understand to be* Grace.

FINIS.

HYDRIOTAPHIA.

Urn-Burial.

OR,

A Discourse of the *Sepulchral Urns* lately found in

NORFOLK.

Together with the

GARDEN of CYRUS,

OR THE

Quincuncial, Lozenge, or Net-work Plantations of the Ancients, Artificially, Naturally, Mystically Considered.

With Sundry Observations.

By *THOMAS BROWNE* Dr. of Physick.

LONDON,
Printed for *Charles Brome*, MDCLXXXVI.

TO MY

Worthy and Honoured Friend,

THOMAS *Le* GROS

OF

CROSTWICK, Eſquire.

WHen the Funeral Pyre was out, and the laſt Valediction over, men took a laſting adieu of their interred Friends, little expecting the curioſity of future Ages ſhould comment upon their Aſhes, and having no old experience of the duration of their Reliques, held no opinion of ſuch after-conſiderations.

But who knows the fate of his bones, or how often he is to be buried? who hath the Oracle of his aſhes, or whether they are to be ſcattered? The Reliques of many lie like the ruines of * *Pompey's*, in all parts of the Earth; And when they arrive at your hands, theſe may ſeem to have wandred far, who in a direct † and *Meridian* Travell, have but few miles of known Earth between your ſelf and the Pole.

That the bones of *Theſeus* ſhould be ſeen again * in *Athens*, was not beyond conjecture, and hopeful expectation; but that theſe ſhould ariſe ſo opportunely to ſerve your ſelf, was an hit of fate and honour beyond prediction.

We cannot but wiſh theſe Urns might have the effect of Theatrical veſſels, and great † *Hippodrome* Urns in *Rome*; to reſound the acclamations and honour due unto you.

* *Pompeios juvenes Aſia atq; Europa, ſed ipſum terra tegit Libyos.*

† Little directly, but Sea between your houſe and *Greenland.*

* Brought back by *Cimon.* Plutarch.

† The great Urns in the *Hippodrome* at *Rome* conceived to reſound the voices of people at their ſhows.

But theſe are ſad and Sepulchral Pitchers, which have no joyful voices; ſilently expreſſing old mortality, the ruines of forgotten times, and can only ſpeak with life, how long in this corruptible frame, ſome parts may be uncorrupted; yet able to out-laſt bones long unborn, and nobleſt Pyle * among us.

* Worthily poſſeſſed by that true Gentleman Sir *Horatio Townſhend*; my honoured Friend.

We preſent not theſe as any ſtrange ſight or ſpectacle unknown to your eyes, who have beheld the beſt of Urns, and nobleſt variety of Aſhes; who are your ſelf no ſlender maſter of Antiquities, and can daily command the view of ſo many Imperial faces; Which raiſeth your thoughts unto old things, and conſideration of times before you, when even living men were Antiquities; when the living might exceed the dead, and to depart this World, could not be properly ſaid, to go unto the * greater number. And ſo run up your thoughts upon the Ancient of days, the Antiquaries trueſt object, unto whom the eldeſt parcels are young, and Earth it ſelf an Infant; and without † Ægyptian account makes but ſmall noiſe in thouſands.

* *Abiit ad plures.*

† Which makes the World ſo many years old.

We were hinted by the occaſion, not catched the opportunity to write of old things, or intrude upon the Antiquary. We are coldly drawn unto Diſcourſes of Antiquities, who have ſcarce time before us to comprehend new things, or make out learned Novelties. But ſeeing they aroſe as they lay, almoſt in ſilence among us, at leaſt in ſhort account ſuddenly paſſed over; we were very unwilling they ſhould die again, and be buried twice among us.

Beſide, to preſerve the living, and make the dead to live, to keep men out of their Urns, and diſcourſe of humane fragments in them, is not impertinent unto our profeſſion; whoſe ſtudy is life and death, who daily behold examples of mortality, and of all Men leaſt need artificial *memento's*, or Coffins by our Bed-ſide, to mind us of our Graves.

'Tis time to obſerve Occurrences, and let nothing remarkable eſcape us; The Supinity of elder days hath left ſo much in ſilence, or time hath ſo martyred the Records, that the moſt * induſtrious Heads do find no eaſie work to erect a new *Britannia*.

* Wherein Mr. *Dugdale* hath excellently well endeavoured, and worthy to be countenanced by ingenuous and noble perſons.

'Tis opportune to look back upon old times, and contemplate our Forefathers. Great Examples grow thin, and

to

to be fetched from the paſſed world. Simplicity flies away, and Iniquity comes at long ſtrides upon us. We have enough to do to make up our ſelves from preſent and paſſed times, and the whole ſtage of things ſcarce ſerveth for our Inſtruction. A compleat piece of Vertue muſt be made up from the *Cento's* of all Ages, as all the Beauties of *Greece* could make but one handſome *Venus*.

When the bones of King *Arthur* were digged up †, the old Race might think, they beheld therein ſome Originals of themſelves; unto theſe of our Urns none here can pretend Relation, and can only behold the Reliques of thoſe perſons, who in their Life giving the Laws unto their Predeceſſors, after long obſcurity, now lie at their mercies. But remembring the early Civility they brought upon theſe Countries, and forgetting long paſſed miſchiefs; We mercifully preſerve their Bones, and piſs not upon their Aſhes.

† In the time of *Henry* the ſecond. *Camden.*

In the offer of theſe Antiquities we drive not at ancient Families, ſo long out-laſted by them; We are far from erecting your worth upon the pillars of your Fore-fathers, whoſe merits you illuſtrate. We honour your old Virtues, conformable unto times before you, which are the Nobleſt Armoury. And having long experience of your friendly Converſation, void of empty Formality, full of Freedom, conſtant and generous Honeſty. I look upon you as a Gemm of the * Old Rock, and muſt profeſs my ſelf even to Urn and Aſhes,

* *Adamas de rupe veteri præſtantiſſimus.*

Norwich, May 1.

Your ever faithful Friend,

and Servant,

THOMAS BROWNE.

To my Worthy and Honoured Friend

NICHOLAS BACON of *Gillingham*, Esquire.

a Plempius, Cabeus, &c.
b Dr. *Harvy.*

HAd I not observed that [a] *purblind men have discoursed well of Sight, and some* [b] *without issue, excellently of Generation; I that was never master of any considerable Garden, had not attempted this Subject. But the Earth is the Garden of Nature, and each fruitful Country a Paradise.* Dioscorides *made most of his Observations in his march about with* Antonius; *and* Theophrastus *raised his generalities chiefly from the Field.*

c Besleri *Hortus Eystetensis.*
d Bauhini *Theatrum Botanicum,* &c.
e My worthy friend M. *Goodier,* an ancient and learned Botanist.
f As in *London* and divers parts, whereof we mention none, lest we seem to omit any.

Beside we write no Herbal, nor can this Volume deceive you, who have handled the [c] *massiest thereof: who know that three* [d] *Folio's are yet too little, and how New Herbals fly from* America *upon us: from persevering Enquirers, and* [e] *old in those singularities, we expect such Descriptions. Wherein* [f] England *is now so exact, that it yields not to other Countries.*

We pretend not to multiply vegetable divisions by Quincuncial and Reticulate Plants; or erect a new Phytology. The Field of Knowledge hath been so traced, it is hard to spring any thing new. Of old things we write something new. If truth may receive addition, or envy will have any thing new; since the Ancients knew the late Anatomical Discoveries, and Hippocrates *the Circulation.*

g Hippocrates de superfœtatione, de dentitione.

You have been so long out of trite learning, that 'tis hard to find a Subject proper for you; and if you have met with a Sheet upon this, we have missed our Intention. In this multiplicity of writing, bye and barren Themes are best fitted for Invention; Subjects so often discoursed confine the Imagination, and fix our conceptions unto the notions of fore-writers. Beside, such Discourses allow excursions, and venially admit of collateral truths, though at some distance from their principals. Wherein if we sometimes take wide liberty, we are not single, but err by great [g] *example.*

He that will illustrate the excellency of this Order, may easily fail upon so spruce a Subject, wherein we have not affrighted the common Reader with any other Diagramms, than of it self; and have industriously declined illustrations from rare and unknown Plants.

h Rules without exceptions.

Your discerning judgment so well acquainted with that study, will expect herein no Mathematical truths, as well understanding how few generalities and [h] Ufinita's *there are in nature. How* Scaliger *hath found exceptions in most Universals of* Aristotle *and* Theophrastus. *How Botanical Maxims must have fair allowance, and are tolerably current, if not intolerably over-ballanced by exceptions.*

You

You have wisely ordered your vegetable delights; beyond the reach of exception. The Turks *who past their days in Gardens here, will have Gardens also hereafter, and delighting in Flowers on Earth, must have Lilies and Roses in Heaven. In Garden Delights 'tis not easie to hold a Mediocrity; that insinuating pleasure is seldom without some extremity. The Ancients venially delighted in flourishing Gardens; Many were Florists that knew not the true use of a Flower; And in* Plinie's *days none had directly treated of that Subject. Some commendably affected Plantations of venomous Vegetables, some confined their delights unto single Plants, and* Cato *seemed to dote upon Cabbage; while the ingenuous delight of Tulipists, stands saluted with hard language, even by their own* i *Professors.*

i *Tulipo-mania, Narrencruiid, Laurenberg. Pet. Hondius in lib.* Belg.

That in this Garden Discourse, we range into extraneous things, and many parts of Art and Nature, we follow herein the example of old and new Plantations, wherein noble spirits contented not themselves with Trees, but by the attendance of Aviaries, Fish-ponds, and all variety of Animals, they made their Gardens the Epitome of the Earth, and some resemblance of the secular shows of old.

That we conjoyn these parts of different Subjects; or that this should succeed the other; Your judgment will admit without impute of incongruity; Since the delightful World comes after Death, and Paradise succeeds the Grave. Since the verdant state of things is the Symbol of the Resurrection, and to flourish in the state of Glory, we must first be sown in corruption. Beside the ancient practice of Noble Persons, to conclude in Garden-Graves, and Urns themselves of old, to be wrapt up with Flowers and Garlands.

Nullum sine venia placuisse eloquium, *is more sensibly understood by Writers, than by Readers; nor well apprehended by either, till works have hanged out like* Apelles *his Pictures; wherein even common eyes will find something for emendation.*

To wish all Readers of your abilities, were unreasonably to multiply the number of Scholars beyond the temper of these times. But unto this ill-judging Age, we charitably desire a portion of your equity, judgment, candour, and ingenuity; wherein you are so rich, as not to lose by diffusion. And being a flourishing branch of that k *Noble Family, unto which we owe so much observance, you are not new set, but long rooted in such perfection; whereof having had so lasting confirmation in your worthy conversation, constant amity, and expression; and knowing you a serious Student in the highest* Arcana's *of Nature; with much excuse we bring these low delights, and poor maniples to your Treasure.*

k Of the most worthy Sir *Edmund Bacon* prime Baronet, my true and noble Friend.

Norwich *May* 1. *Your affectionate Friend and Servant,*

Thomas Browne.

En Sum quod digitis Quinque Levatur onus Propert:

HYDRIOTAPHIA,

Urn-Burial,

OR,

A Brief Diſcourſe of the *Sepulchral Urns* lately found in

NORFOLK.

CHAPTER I.

IN the deep Diſcovery of the Subterranean World, a ſhallow Part would ſatisfie ſome Enquirers; who, if two or three yards were open about the ſurface, would not care to rake the Bowels of *Potoſi* *, and Regions towards the Centre. Nature hath furniſhed one part of the Earth, and Man another. The treaſures of time lie high, in Urns, Coyns, and Monuments, ſcarce below the roots of ſome Vegetables. Time hath endleſs Rarities, and ſhows of all Varieties; which reveals old things in Heaven, makes new Diſcoveries in Earth, and even Earth it ſelf a Diſcovery. That great Antiquity *America* lay buried for a thouſand years; and a large part of the Earth is ſtill in the Urn unto us.

* The rich Mountain of *Peru*.

Though if *Adam* were made out of an extract of the Earth, all parts might challenge a Reſtitution, yet few have returned their Bones far lower than they might receive them; not affecting the Graves of Giants, under hilly and heavy Coverings, but content with leſs than their own depth, have wiſhed their Bones might lie ſoft, and the Earth be light upon them; Even ſuch as hope to riſe again, would not be content with central Interrment, or ſo deſperately to place their Reliques as to lie beyond diſcovery; and in no way to be ſeen again; which happy contrivance hath made communication with our Forefathers, and left unto our view ſome parts, which they never beheld themſelves

Though Earth hath engroſſed the Name, yet Water hath proved the ſmarteſt Grave; which in forty days ſwallowed almoſt Mankind, and the living Creation; Fiſhes not wholly eſcaping, except the Salt Ocean were handſomly contempered by a mixture of the freſh Element.

Many have taken voluminous pains to determine the ſtate of the Soul upon diſunion; but men have been moſt phantaſtical in the ſingular con-

trivances of their corporal diſſolution: whileſt the ſobereſt Nations have reſted in two ways, of ſimple inhumation and burning.

That carnal interrment or burying, was of the elder date, the old examples of *Abraham* and the Patriarchs are ſufficient to illuſtrate; And were without competition, if it could be made out, that *Adam* was buried near *Damaſcus*, or Mount *Calvary*, according to ſome Tradition. God himſelf, that buried but one, was pleaſed to make choice of this way, collectible from Scripture-expreſſion, and the hot conteſt between Satan and the Arch-Angel, about diſcovering the body of *Moſes*. But the practice of Burning was alſo of great Antiquity, and of no ſlender extent. For (not to derive the ſame from *Hercules*) noble deſcriptions there are hereof in the Grecian Funerals of *Homer*, In the formal Obſequies of *Patroclus*, and *Achilles*; and ſomewhat elder in the *Theban* War, and ſolemn combuſtion of *Meneceus*, and *Archemorus*, contemporary unto *Jair* the Eighth Judge of *Iſrael*. Confirmable alſo among the *Trojans*, from the Funeral Pyre of *Hector*, burnt before the gates of *Troy*. And the * burning of *Penthefilea* the *Amazonian Queen*: and long continuance of that practice, in the inward Countries of *Aſia*; while as low as the Reign of *Julian*, we find that the King of *Chionia* † burnt the body of his Son, and interred the Aſhes in a Silver Urn.

The ſame practice extended alſo far Weſt *, and beſides *Herulians*, *Getes*, and *Thracians*, was in uſe with moſt of the *Celtæ*, *Sarmatians*, *Germans*, *Gauls*, *Danes*, *Swedes*, *Norwegians*; not to omit ſome uſe thereof among *Carthaginians* and *Americans*: Of greater Antiquity among the *Romans* than moſt opinion, or *Pliny* ſeems to allow. For (beſide the old Table Laws of burning † or burying within the City, of making the Funeral fire with plained wood, or quenching the fire with wine) *Manlius* the Conſul burnt the body of his Son: *Numa* by ſpecial Clauſe of his Will, was not burnt but buried; And *Remus* was ſolemnly buried, according to the deſcription of *Ovid* *.

* Q. *Calaber.* lib. 1.

† Ammianus Marcellinus, Gumbrates King of *Chionia*, a Country near *Perſia*.

* Arnold. Montan. nor. in Cæſ. Commentar. Lil. Gyraldus Kirkmannus.

† 12 Tabul. part. 1. de jure ſacro.

Hominem mortuum in urbe ne ſepelito, neve urito. tom. 2. Rogum aſciâ ne polito. to. 4. Item Vigeneri Annotat. in Livium, & Alex. cum Tiraquello. Roſcinus cum Dempſtero. *Ultima prolato ſubdita flamma rogo. De Faſt. lib. 4. cum Car. Neapol. anapryxi.

Cornelius Sylla was not the firſt whoſe body was burned in *Rome*, but of the *Cornelian* Family, which being indifferently, not frequently uſed before; from that time ſpread, and became the prevalent practice. Not totally purſued in the higheſt run of Cremation; For when even Crows were funerally burnt, *Poppæa* the Wife of *Nero* found a peculiar grave interrment. Now as all cuſtoms were founded upon ſome bottom of Reaſon, ſo there wanted not grounds for this; according to ſeveral apprehenſions of the moſt rational diſſolution. Some being of the opinion of *Thales*, that Water was the original of all things, thought it moſt equal to ſubmit unto the principle of putrefaction, and conclude in a moiſt relentment. Others conceived it moſt natural to end in Fire, as due unto the maſter Principle in the Compoſition, according to the Doctrine of *Heraclitus*. And therefore heaped up large piles, more actively to waft them toward that Element, whereby they alſo declined a viſible degeneration into worms, and left a laſting parcel of their Compoſition.

Some apprehended a purifying virtue in Fire, refining the groſſer commixture, and firing out the Æthereal Particles ſo deeply immerſed in it. And ſuch as by tradition or rational conjecture held any hint of the final Pyre of all things; or that this Element at laſt muſt be too hard for all the reſt; might conceive moſt naturally of the fiery diſſolution. Others pretending no natural grounds, politickly declined the Malice of Enemies upon their buried bodies. Which conſideration led *Sylla* unto this practice; who having thus ſerved the body of *Marius*, could not but fear a retaliation upon his own; entertained after in the Civil Wars, and revengeful contentions of *Rome*.

But as many Nations embraced, and many left it indifferent, ſo others too much affected, or ſtrictly declined this practice. The *Indian Brachmans* ſeemed

too

too great friends unto Fire, who burnt themselves alive, and thought it the noblest way to end their days in Fire; according to the expression of the Indian, burning himself at *Athens* *, in his last words upon the Pyre unto the amazed Spectators, *Thus I make my self Immortal.*

But the *Chaldeans* the great Idolaters of Fire, abhorred the burning of their carcasses, as a pollution of that Deity. The *Persian Magi* declined it upon the like scruple, and being only sollcitous about their bones, exposed their flesh to the prey of Birds and Dogs. And the *Persees* now in *India*, which expose their bodies unto Vultures, and endure not so much as *feretra* or Biers of wood, the proper fuel of Fire, are led on with such niceties. But whether the ancient *Germans* who burned their dead, held any such fear to pollute their Deity of *Herthus*, or the Earth, we have no Authentick conjecture.

The Ægyptians were afraid of Fire, not as a Deity, but a devouring Element, mercilesly consuming their bodies, and leaving too little of them; and therefore by precious Embalments, depositure in dry Earths, or handsome inclosure in glasses, contrived the notablest ways of integral conservation. And from such Ægyptian scruples imbibed by *Pythagoras*, it may be conjectured that *Numa* and the Pythagorical Sect first waved the fiery solution.

The *Scythians* who swore by Wind and Sword, that is, by Life and Death, were so far from burning their bodies, that they declined all interment, and made their graves in the Air: And the *Ichthyophagi* or fish-eating Nations about *Ægypt*, affected the Sea for their grave: Thereby declining visible corruption, and restoring the debt of their bodies. Whereas the old Heroes in *Homer*, dreaded nothing more than water or drowning; probably upon the old opinion of the fiery substance of the Soul, only extinguishable by that Element; And therefore the Poet emphatically implieth the total destruction in this kind of Death, which happened to *Ajax Oileus* †.

The old * *Balearians* had a peculiar mode, for they used great Urns and much wood, but no fire in their Burials, while they bruised the flesh and bones of the dead, crowded them into Urns, and laid heaps of wood upon them. And the * *Chinois* without cremation or urnal interrment of their bodies, make use of trees and much burning, while they plant a Pine-tree by their grave, and burn great numbers of printed draughts of Slaves and Horses over it, civilly content with their companies *in Effigie*, which barbarous Nations exact unto Reality.

Christians abhorred this way of Obsequies, and though they stickt not to give their bodies to be burnt in their lives, detested that mode after death; affecting rather a depositure than absumption, and properly submitting unto the sentence of God, to return not unto ashes but unto dust again; conformable unto the practice of the Patriarchs, the interrment of our Saviour, of *Peter*, *Paul*, and the ancient Martyrs. And so far at last declining promiscuous interrment with Pagans, that some have suffered Ecclesiastical censures, for making no scruple thereof.

The *Musselman* believers will never admit this fiery Resolution. For they hold a present Trial from their black and white Angels in the grave; which they must have made so hollow, that they may rise upon their Knees.

The Jewish Nation, though they entertained the old way of inhumation, yet sometimes admitted this practice. For the men of *Jabesh* burnt the body of *Saul*: And by no prohibited practice, to avoid contagion or pollution, in time of Pestilence, burnt the bodies of their friends †. And when they burnt not their dead bodies, yet sometimes used great burnings near and about them, deducible from the expressions concerning *Jehoram*, *Zedechias*, and the sumptuous Pyre of *Asa*: And were so little averse from * Pagan burning, that the Jews lamenting the Death of *Cæsar* their Friend, and Revenger on *Pompey*, frequented the place where his body was burnt for many Nights together. And as they raised noble Monuments and *Mausolæums* for their own Nation †, so they were not scrupulous in erecting some for others, according to the practice of *Daniel*, who left

* And therefore the Inscription of his Tomb was made accordingly. *Nic. Damasc.*

† Which *Magius* reads. ἐξαπόλωλε.

* *Diodorus Siculus.*

* *Ramusius* in *Navigat.*

Martialis the Bishop. *Cyprian.*

† Amos 6. 10.

* *Sueton.* in vita. *Jul Cæs.*

† As that magnificent sepulchral Monument erected by *Simon*, 1 Macc. 13.

that lasting Sepulchral Pyle in *Ecbatana*, for the *Median* and *Persian* Kings *.

But even in times of subjection and hottest use, they conformed not unto the *Roman* Practice of Burning; whereby the Prophecy was secured concerning the body of Christ, that it should not see corruption, or a bone should not be broken; which we believe was also providentially prevented, from the Souldiers Spear and Nails that past by the little bones both in his Hands and Feet: Not of ordinary contrivance, that it should not corrupt on the Cross, according to the Laws of *Roman* Crucifixion, or an hair of his Head perish, though observable in Jewish Customs, to cut the hairs of Malefactors.

Nor in their long co-habitation with Ægyptians, crept into a custom of their exact embalming, wherein deeply slashing the Muscles, and taking out the Brains and Entrails, they had broken the subject of so entire a Resurrection, nor fully answered the Types of *Enoch*, *Eliah*, or *Jonah*, which yet to prevent or restore, was of equal facility unto that rising Power, able to break the fasciations and bands of death, to get clear out of the Cerecloth, and an hundred pounds of Oyntment, and out of the Sepulchre before the Stone was rolled from it.

But though they embraced not this practice of Burning, yet entertained they many Ceremonies agreeable unto *Greek* and *Roman* Obsequies. And he that observeth their Funeral Feasts, their Lamentations at the Grave, their Musick, and weeping Mourners; how they closed the eyes of their friends, how they washed, anointed, and kissed the Dead; may easily conclude these were not meer Pagan-Civilities. But whether that mournful burthen, and treble calling out after *Absalom*, had any reference unto the last Conclamation, and triple Valediction, used by other Nations, we hold but a wavering Conjecture.

Civilians make Sepulture but of the Law of Nations, others do naturally found it and discover it also in Animals. They that are so thick-skinned as still to credit the story of the *Phœnix*, may say something for Animal burning: More serious conjectures find some examples of Sepulture in Elephants, Cranes, the Sepulchral Cells of Pismires, and practice of Bees; which civil society carrieth out their Dead, and hath Exequies, if not Interrments.

* Καλασκιάζουσι μὲν ἀμφὶ τὰ σώματα τὰ τετελευτηκότα, whereof a Jewish Priest had always the custody, unto *Josephus* his days. *Jos.* Lib. 10. Antiq.

CHAP. II.

THE Solemnities, Ceremonies, Rites of their Cremation or Interrment, so solemnly delivered by Authors, we shall not disparage our Reader to repeat. Only the last and lasting part in their Urns, collected Bones and Ashes, we cannot wholly omit or decline that Subject, which occasion lately presented, in some discovered among us.

In a Field of old *Walsingham*, not many months past, were digged up between forty and fifty Urns, deposited in a dry and sandy soil, not a yard deep, nor far from one another: Not all strictly of one figure, but most answering these described: Some containing two pounds of bones, distinguishable in Skulls, Ribs, Jaws, Thigh-bones, and Teeth, with fresh impressions of their Combustion. Besides the extraneous substances, like pieces of small boxes, or combes handsomly wrought, handles of small brass instruments, brasen nippers, and in one some kind of *Opal* *.

* In one sent me by my worthy Friend, Dr. *Thomas Witherly* of *Walsingham*.

Near the same plot of ground, for about six yards compass were digged up Coals and incinerated substances, which begat conjecture that this was the *Ustrina* or place of burning their bodies, or some sacrificing place unto the *Manes*, which was properly below the surface of the ground, as the *Aræ* and Altars unto the gods and *Heroes* above it.

That these were the Urns of *Romans* from the common custom and place where they were found, is no obscure conjecture, not far from a *Roman* Garrison, and but five Miles from *Brancaster*, set down by ancient Record under

under the name of *Brannodunum*. And where the adjoyning Town, containing ſeven Pariſhes, in no very different ſound, but Saxon Termination, ſtill retains the Name of *Burnham*, which being an early ſtation, it is not improbable the neighbour parts were filled with Habitations, either of *Romans* themſelves, or *Britains Romaniſed*, which obſerved the *Roman* Cuſtoms.

Nor is it improbable that the *Romans* early poſſeſſed this Countrey; for though we meet not with ſuch ſtrict particulars of theſe parts, before the new Inſtitution of *Conſtantine*, and military charge of the Count of the *Saxon* ſhore, and that about the *Saxon* Invaſions, the *Dalmatian* Horſemen were in the Garriſon of *Brancaſter*: Yet in the time of *Claudius*, *Veſpaſian*, and *Severus*; we find no leſs than three Legions diſperſed through the Province of *Britain*. And as high as the Reign of *Claudius* a great overthrow was given unto the *Iceni*, by the *Roman* Lieutenant *Oſtorius*. Not long after the Countrey was ſo moleſted, that in hope of a better ſtate, *Praſtaagus* bequeathed his Kingdom unto *Nero* and his Daughters; and *Boadicea* his Queen fought the laſt deciſive Battle with *Paulinus*. After which time and Conqueſt of *Agricola* the Lieutenant of *Veſpaſian*, probable it is they wholly poſſeſſed this Countrey, ordering it into Garriſons or Habitations, beſt ſuitable with their Securities. And ſo ſome *Roman* Habitations not improbable in theſe parts, as high as the time of *Veſpaſian*, where the Saxons after ſeated, in whoſe thin-fill'd Maps we yet find the Name of *Walſingham*. Now if the *Iceni* were but *Gammadims*, *Anconians*, or men that lived in an Angle, Wedge or Elbow of *Britain*, according to the Original Etymology, this Country will challenge the Emphatical appellation, as moſt properly making the Elbow or Iken of *Icenia*.

That *Britain* was notably populous is undeniable, from that expreſſion of *Cæſar* †. That the *Romans* themſelves were early in no ſmall Numbers, Seventy thouſand with their aſſociates, ſlain by *Boadicea*, affords a ſure account. And though not many *Roman* Habitations are now known, yet ſome by old Works, Rampiers, Coyns, and Urns do teſtifie their Poſſeſſions. Some Urns have been found at *Caſtor*, ſome alſo about *Southcreak*, and not many years paſt, no leſs than Ten in a Field at *Buxton* *, not near any recorded Garriſon. Nor is it ſtrange to find *Roman* Coyns of Copper and Silver among us; of *Veſpaſian*, *Trajan*, *Adrian*, *Commodus*, *Antoninus*, *Severus*, &c. But the greater number of *Diocleſian*, *Conſtantine*, *Conſtans*, *Valens*, with many of *Victorinus Poſthumius*, *Tetricus*, and the thirty Tyrants in the Reign of *Gallienus*; and ſome as high as *Adrianus* have been found about *Thetford*, or *Sitomagus*, mentioned in the Itinerary of *Antoninus*, as the way from *Venta* or *Caſtor* unto *London* †. But the moſt frequent diſcovery is made at the two *Caſters* by *Norwich* and *Yarmouth* *, at *Burghcaſtle* and *Brancaſter* †.

† *Hominum infinita multitudo eſt, creberrimaq; ædificia ferè Gallicis conſimilia.* Cæſ. *de bello Gal.* l. 5.

* In the ground of my worthy Friend *Rob. Jegon* Eſq; wherein ſome things contained were preſerved by the moſt worthy Sir *William Paſton* Bt.

† From *Caſtor* to *Thetford* the *Romans* accounted thirty two miles, and from thence obſerved not our common Road to *London*, but paſſed by *Combretonium ad Anſam*, *Caxonium*, *Cæſaromagus*, &c. by *Britenham*, *Coggeſhall*, *Chelmsford*, *Burntwood*, &c.

* Moſt at *Caſter* by *Yarmouth*, found in a place called *Eaſt-bloudy-burgh furlong*, belonging to Mr. *Thomas Wood*, a perſon of civility, induſtry and knowledge in this way, who hath made obſervation of remarkable things about him, and from whom we have received divers Silver and Copper Coyns.

† Belonging to that Noble Gentleman, and true example of Worth, Sir *Ralph Hare* Baronet, my honoured Friend.

Beſides the *Norman*, *Saxon* and *Daniſh* pieces of *Cuthred*, *Canutus*, *William*, *Matilda* *, and others, ſome *Britiſh* Coyns of Gold have been diſperſedly found; And no ſmall number of Silver pieces near † *Norwich*; with a rude head upon the obverſe, and an ill formed Horſe on the reverſe, with Inſcriptions *Ic Duro T.* whether implying *Iceni*, *Durotriges*, *Taſcia*, or *Trinobantes*, we leave to higher conjecture. Vulgar Chronology will have *Norwich* Caſtle as old as *Julius Cæſar*; but his diſtance from theſe parts, and its *Gothick* form of ſtructure, abridgeth ſuch Antiquity. The *Britiſh* Coyns afford conjecture of early Habitation in theſe parts, though the City of *Norwich* aroſe from the Ruines of *Venta*, and though perhaps not without ſome Habitation before, was enlarged, builded, and nominated by the *Saxons*. In what bulk or populoſity it ſtood in the old Eaſt-angle Monarchy, Tradition and Hiſtory are ſilent. Conſiderable it was in the *Daniſh* Eruptions, when

* A piece of *Maud* the Empreſs, ſaid to be found in *Buckenham* Caſtle with this Inſcription, *Elle n'a elle.*

† At *Thorpe*.

when *Sueno* burnt *Thetford* and *Norwich* *, and *Ulfketel* the Governour thereof, was able to make some resistance, and after endeavoured to burn the *Danish* Navy.

* *Brampton Abbas Forevallensis.*

How the *Romans* left so many Coyns in Countries of their Conquests, seems of hard resolution, except we consider how they buried them under ground, when upon Barbarous Invasions they were fain to desert their Habitations in most part of their Empire, and the strictness of their Laws forbidding to transfer them to any other uses; Wherein the * *Spartans* were singular, who to make their Copper Money useless, contempered it with Vinegar. That the *Britains* left any, some wonder; since their Money was Iron, and Iron Rings before *Cæsar*; and those of after stamp by permission, and but small in bulk and bigness; that so few of the *Saxons* remain, because overcome by succeeding Conquerours upon the place, their Coyns by degrees passed into other Stamps, and the Marks of after Ages.

* Plut. *in vita Licurg.*

Than the time of these Urns deposited, or precise Antiquity of these Reliques, nothing of more uncertainty. For since the Lieutenant of *Claudius* seems to have made the first progress into these parts; since *Boadicea* was overthrown by the Forces of *Nero*, and *Agricola* put a full end to these Conquests; it is not probable the Country was fully Garrison'd or planted before; and therefore however these Urns might be of later date, not likely of higher Antiquity.

And the succeeding Emperours desisted not from their Conquests in these and other parts; as testified by History and Medal inscription yet extant: The Province of *Britain* in so divided a distance from *Rome*, beholding the Faces of many Imperial Persons, and in large account no fewer than *Cæsar*, *Claudius*, *Britannicus*, *Vespasian*, *Titus*, *Adrian*, *Severus*, *Commodus*, *Geta*, and *Caracalla*.

A great obscurity herein, because no Medal or Emperours Coyn enclosed, which might denote the date of their interrments, observable in many Urns, and found in those of *Spittle* Fields by *London*, which contained the Coyns of *Claudius*, *Vespasian*, *Commodus*, *Antoninus*, attended with Lacrymatories, Lamps, Bottles of Liquor, and other appurtenances of affectionate superstition, which in these rural Interrments were wanting.

Stow's Survey of *London.*

Some uncertainty there is from the period or term of burning, or the cessation of that practice. *Macrobius* affirmeth it was disused in his days. But most agree, though without authentick Record, that it ceased with the *Antonini*. Most safely to be understood after the Reign of those Emperours, which assumed the Name of *Antoninus*, extending unto *Heliogabalus*. Not strictly after *Marcus*; For about fifty years later we find the magnificent burning, and consecration of *Severus*; and if we so fix this period or cessation, these Urns will challenge above thirteen hundred years.

But whether this practice was only then left by Emperours and great persons, or generally about *Rome*, and not in other Provinces, we hold no authentick account. For after *Tertullian*, in the days of *Minucius*, it was obviously objected unto Christians, that they condemned the practice of burning *. And we find a passage in *Sidonius* †, which asserteth that practice in *France* unto a lower account. And perhaps not fully disused till Christianity fully established, which gave the final extinction to these Sepulchral Bonfires.

* *Execrantur rogos, & damnant ignium sepulturam.* Min. in Oct.

Whether they were the bones of men or women or children, no authentick decision from ancient custom in distinct places of burial. Although not improbably conjectured, that the double Sepulture or burying place of *Abraham*, had in it such intention. But from exility of bones, thinness of Skulls, smallness of Teeth, Ribs, and Thigh-bones; not improbable that many thereof were persons of *minor* Age, or Women. Confirmable also from things contained in them: In most were found substances resembling Combs, Plates like Boxes, fastened with Iron pins, and handsomely overwrought like the Necks or Bridges of Musical Instruments, long Brass plates overwrought like the handles of neat Implements, brazen Nippers to pull away Hair, and in one a kind of *Opale* yet maintaining a bluish colour.

† *Sidon. Apollinaris.*

Now that they accustomed to burn or bury with them, things wherein they

they excelled, delighted, or which were dear unto them, either as farewels unto all pleasure, or vain apprehension that they might use them in the other World, is testified by all Antiquity. Observable from the Gemm or Beryl Ring upon the finger of *Cynthia*, the Mistress of *Propertius*, when after her Funeral Pyre her Ghost appeared unto him. And notably illustrated from the Contents of that *Roman* Urn preserved by Cardinal *Farnese* *, wherein besides great number of Gemms with Heads of Gods and Goddesses, were found an Ape of *Agath*, a Grashopper, an Elephant of Amber, a Crystal Ball, three Glasses, two Spoons, and six Nuts of Crystal. And beyond the content of Urns, in the Monument of *Childerick* the first †, and fourth King from *Pharamond*, casually discovered three years past at *Tournay*, restoring unto the World much Gold richly adorning his Sword, two hundred Rubies, many hundred Imperial Coyns, three hundred golden Bees, the bones and horseshoes of his Horse interred with him, according to the barbarous magnificence of those days in their Sepulchral Obsequies. Although if we steer by the conjecture of many and Septuagint expression; some trace thereof may be found even with the ancient Hebrews, not only from the Sepulchral Treasure of *David*, but the Circumcision Knives which *Joshua* also buried.

* *Vigenerī Annot. in 4. Liv.*

† *Chifflet. in Anast. Childer.*

Some men considering the Contents of these Urns, lasting pieces and toyes included in them, and the custom of burning with many other Nations, might somewhat doubt whether all Urns found among us, were properly *Roman* Reliques, or some not belonging unto our *British*, *Saxon*, or *Danish* Forefathers.

In the Form of Burial among the ancient *Britains*, the large Discourses of *Cæsar*, *Tacitus*, and *Strabo* are silent: For the discovery whereof, with other particulars, we much deplore the loss of that Letter which *Cicero* expected or received from his Brother *Quintus*, as a resolution of *British* customs; or the account which might have been made by *Scribonius Largus* the Physician, accompanying the Emperour *Claudius*, who might have also discovered that frugal Bit * of the Old *Britains*, which in the bigness of a Bean could satisfie their thirst and hunger.

* *Dionis ex. cerpta per Xiphilin. in Severo.*

But that the *Druids* and ruling Priests used to burn and bury, is expressed by *Pomponius*; That *Bellinus* the Brother of *Brennus*, and King of *Britains* was burnt, is acknowledged by *Polydorus*, as also by *Amandus Zirexensis* in *Historia*, and *Pineda* in his *Universa Historia* Spanish. That they held that practice in *Gallia*, *Cæsar* expressly delivereth. Whether the *Britains* (probably descended from them, of like Religion, Language and Manners) did not sometimes make use of burning; or whether at least such as were after civilized unto the *Roman* life and manners, conformed not unto this practice, we have no Historical Assertion or Denial. But since from the account of *Tacitus* the *Romans* early wrought so much Civility upon the *British* Stock, that they brought them to build Temples, to wear the Gown, and study the *Roman* Laws and Language, that they conformed also unto their Religious Rights and Customs in Burials, seems no improbable conjecture.

That burning the dead was used in *Sarmatia* is affirmed by *Gaguinus*, that the *Sueons* and *Gothlanders* used to burn their Princes and great persons, is delivered by *Saxo* and *Olaus*; that this was the old *German* practice, is also asserted by *Tacitus*. And though we are bare in Historical particulars of such Obsequies in this Island, or that the *Saxons*, *Jutes* and *Angles* burnt their Dead, yet came they from parts where 'twas of ancient practice; the *Germans* using it, from whom they were descended. And even in *Jutland* and *Slesvick* in *Anglia Cymbrica*, Urns with bones were found not many years before us

But the *Danish* and Northern Nations have raised an *Æra* or point of compute from their custom of burning their Dead: Some deriving it from *Unguinus*, some from *Frotho* the great; who ordained by Law, that Princes and Chief Commanders should be committed unto the Fire, though the common sort had the common Grave-interrment. So *Starkatterus* that old *Heroe* was burnt, and *Ringo* royally burnt the body of *Harold* the King slain by him.

Roiſold, Brendetyde. Ild tyde.

What

What time this Cuſtom generally expired in that Nation, we diſcern no aſſured period; whether it ceaſed before Chriſtianity, or upon their Converſion, by *Auſgurius* the Gaul in the time of *Ludovicus Pius* the Son of *Charles* the Great, according to good computes; or whether it might not be uſed by ſome perſons, while for an hundred and eighty years Paganiſm and Chriſtianity were promiſcuouſly embraced among them, there is no aſſured concluſion. About which times the *Danes* were buſie in *England*, and particularly infeſted this Country: Where many Caſtles and ſtrong Holds were built by them, or againſt them, and great number of Names and Families ſtill derived from them. But ſince this cuſtom was probably diſuſed before their Invaſion or Conqueſt, and the *Romans* confeſſedly practiſed the ſame ſince their poſſeſſion of this Iſland, the moſt aſſured account will fall upon the *Romans*, or *Britains Romanized.*

* *Olai Wormii monumenta & Antiquitat. Dan.*

† *Adolphus Cyprius in Annal. Sleſwic. urnis adeo abundabat collis*, &c.

* In Oxfordſhire, *Camden.*

† In Cheſhire, *Twinus de rebus Albionicis.*

* In Norfolk. *Hollingſhead.*

However certain it is, that Urns conceived of no *Roman* Original, are often digged up both in *Norway* and *Denmark*, handſomly deſcribed, and graphically repreſented by the Learned Phyſician *Wormius* *; and in ſome parts of *Denmark* in no ordinary number, as ſtands delivered by Authours exactly deſcribing thoſe Countries †. And they contained not only bones, but many other ſubſtances in them, as Knives, pieces of Iron, Braſs and Wood, and one of *Norway* a braſs gilded Jews-harp.

Nor were they confuſed or careleſs in diſpoſing the nobleſt ſort, while they placed large ſtones in circle about the Urns, or bodies which they interred: Somewhat anſwerable unto the Monument of *Rollrich* ſtones in *England* *, or Sepulchral Monument probably erected by *Rollo*, who after conquered *Normandy*. Where 'tis not improbable ſomewhat might be diſcovered. Mean while to what Nation or perſon belonged that large Urn found at *Aſhburie* *, containing mighty bones, and a Buckler; What thoſe large Urns found at little *Maſſingham* †, or why the *Angleſea* Urns are placed with their mouths downward, remains yet undiſcovered.

CHAP. III.

PLaiſtered and whited Sepulchres were anciently affected in cadaverous, and corrupted Burials; And the rigid Jews were wont to garniſh the Sepulchres of the * righteous; *Ulyſſes* in *Hecuba* † cared not how meanly he lived, ſo he might find a noble Tomb after death. Great Princes affected great Monuments; And the fair and larger Urns contained no vulgar Aſhes, which makes that diſparity in thoſe which time diſcovereth among us. The preſent Urns were not of one capacity, the largeſt containing above a gallon; Some not much above half that meaſure; nor all of one figure, wherein there is no ſtrict conformity, in the ſame or different Countries; Obſervable from thoſe repreſented by *Caſalius*, *Boſio*, and others, though all found in *Italy:* While many have handles, ears, and long necks, but moſt imitate a circular figure, in a ſpherical and round compoſure; whether from any myſtery, beſt duration or capacity, were but a conjecture. But the common form with necks was a proper figure, making our laſt bed like our firſt; nor much unlike the Urns of our Nativity, while we lay in the nether part of the Earth *, and inward vault of our Microcoſm. Many Urns are red, theſe but of a black colour, ſomewhat ſmooth, and dully ſounding, which begat ſome doubt, whether they were burnt, or only baked in Oven or Sun: According to the ancient way, in many bricks, tiles, pots, and teſtaceous works; and as the word *teſta* is properly to be taken, when occurring without addition: And chiefly intended by *Pliny*, when he commendeth Bricks and Tiles of two years old, and to make them in the Spring. Nor only theſe concealed pieces, but the open magnificence of Antiquity, ran much in the Artifice of Clay. Hereof the Houſe of *Mauſolus* was built, thus old *Jupiter* ſtood in the Capitol, and the *Statua* of *Hercules* made

* Matt. 23.

† *Euripides.*

* Pſal. 63.

made in the Reign of *Tarquinius Priſcus*, was extant in *Pliny's* days. And ſuch as declined burning or Funeral Urns, affected Coffins of Clay, according to the mode of *Pythagoras*, a way preferred by *Varro*. But the Spirit of Great ones was above theſe Circumſcriptions, affecting Copper, Silver, Gold, and *Porphyrie* Urns, wherein *Severus* lay; after a ſerious View and Sentence on that which ſhould contain him *. Some of theſe Urns were thought to have been Silvered over, from ſparklings in ſeveral Pots, with ſmall Tinſel parcels; uncertain whether from the Earth; or the firſt mixture in them.

* χωρῆσεις ἦν ἀνθρώπον, ὃν ἡ οἰκουμένη οὐκ ἐχώρησεν. *Dion.*

Among theſe Urns we could obtain no good account of their Coverings; Only one ſeemed arched over with ſome kind of Brick-work. Of thoſe found at *Buxton* ſome were covered with Flints, ſome in other parts with Tiles, thoſe at *Yarmouth Caſter*, were cloſed with *Roman* Bricks. And ſome have proper Earthen Covers adapted and fitted to them. But in the *Homerical* Urn of *Patroclus*, whatever was the ſolid Tegument, we find the immediate Covering to be a purple piece of Silk: And ſuch as had no Covers might have the Earth cloſely preſſed into them; after which diſpoſure were probably ſome of theſe, wherein we found the Bones and Aſhes half mortered unto the ſand and ſides of the Urn; and ſome long Roots of Quich, or Dogs-graſs, wreathed about the bones.

No Lamps, included Liquors, Lacrymatories, or Tear-bottles attended theſe rural Urns, either as ſacred unto the *Manes*, or paſſionate Expreſſions of their ſurviving Friends; While with rich Flames, and hired Tears they ſolemnized their Obſequies, and in the moſt lamented Monuments made one part of their Inſcriptions *. Some find Sepulchral Veſſels containing Liquors, which time hath incraſſated into Gellies. For beſide theſe Lachrymatories, notable Lamps, with Veſſels of Oyls and Aromatical Liquors, attended noble Oſſuaries. And ſome yet retaining a † Vinoſity and Spirit in them, which if any have taſted they have far exceeded the Palats of Antiquity. Liquors not to be computed by years of Annual Magiſtrates, but by great Conjunctions and the fatal Periods of Kingdoms (*a*). The draughts of Conſulary date, were but crude unto theſe, and *Opimian* (*b*) Wine but in the Muſt unto them.

* *Cum lacrymis poſuêre.*

† *Lazius.*

(*a*) About five hundred years. *Plato.*

(*b*) *Vinum Opimianum annorum centum.* Petron.

In ſundry Graves and Sepulchres, we meet with Rings, Coyns, and Chalices; Ancient Frugality was ſo ſevere, that they allowed no Gold to attend the Corps, but only that which ſerved to faſten their Teeth (*c*). Whether the *Opaline* Stone in this Urn were burnt upon the Finger of the Dead, or caſt into the fire by ſome affectionate Friend, it will conſiſt with either cuſtom. But other incinerable ſubſtances were found ſo freſh, that they could feel no ſinge from fire. Theſe upon view were judged to be wood, but ſinking in water and tried by the fire, we found them to be Bone or Ivory. In their hardneſs and yellow colour they moſt reſembled Box, which in old Expreſſions found the Epithete (*d*) of Eternal, and perhaps in ſuch Conſervatories might have paſſed uncorrupted.

(*c*) 12. *Tabul.* l. xi. *de Jure ſacro. Neve aurum addito, aſt quoi auro dentes vincti erunt, id cum illo ſepelire & urere, ſine fraude eſto.*

(*d*) Plin. l. xvi. *Inter ξύλα ἀσαπῆ numerat Theophraſtus.*

That Bay-leaves were found green in the Tomb of S. *Humbert* (*e*), after an hundred and fifty years, was looked upon as miraculous. Remarkable it was unto old Spectators, that the Cypreſs of the temple of *Diana*, laſted ſo many hundred years: The wood of the Ark and Olive Rod of *Aaron* were older at the Captivity. But the Cypreſs of the Ark of *Noah*, was the greateſt Vegetable of Antiquity, if *Joſephus* were not deceived, by ſome fragments of it in his days. To omit the Moor-logs, and Firr-trees found under-ground in many parts of *England*; the undated Ruines of Winds, Flouds or Earthquakes; and which in *Flanders* ſtill ſhew from what quarter they fell, as generally lying in a North-Eaſt Poſition *.

(*e*) *Surius.*

* *Gorop. Becanus in Niloſcopio.*

But though we found not theſe pieces to be Wood, according to firſt apprehenſion, yet we miſſed not altogether of ſome woody ſubſtance; For the bones were not ſo clearly pickt, but ſome Coals were found amongſt them; A way to make Wood perpetual, and a fit aſſociate for Metal, whereon was laid the Foundation of the great *Epheſian* Temple, and which were made the laſting Teſts of old Boundaries and Land-marks. Whileſt we look

look on these, we admire not Observations of Coals found fresh, after four hundred years *. In a long deserted Habitation †, even Egg-shells have been found fresh, not tending to corruption.

In the Monument of King *Childerick*, the Iron Reliques were found all rusty and crumbling into pieces. But our little Iron pins which fastened the Ivory works, held well together, and lost not their Magnetical quality, though wanting a tenacious moisture for the firmer union of parts; although it be hardly drawn into fusion, yet that metal soon submitteth unto rust and dissolution. In the brazen pieces we admired not the duration, but the freedom from rust, and ill savour, upon the hardest attrition; but now exposed unto the piercing Atomes of Air, in the space of a few Months, they begin to spot and betray their green entrals. We conceive not these Urns to have descended thus naked as they appear, or to have entred their graves without the old habit of Flowers. The Urn of *Philopœmen* was so laden with Flowers and Ribbons, that it afforded no sight of it self. The rigid *Lycurgus* allowed Olive and Myrtle. *The Athenians* might fairly except against the practice of *Democritus* to be buried up in Honey; as fearing to embezil a great commodity of their Countrey, and the best of that kind in *Europe*. But *Plato* seemed too frugally politick, who allowed no larger Monument than would contain four Heroick Verses, and designed the most barren ground for Sepulture: Though we cannot commend the goodness of that Sepulchral ground, which was set at no higher rate than the mean Salary of *Judas*. Though the Earth had confounded the Ashes of these Ossuaries, yet the bones were so smartly burnt, that some thin plates of brass were found half melted among them: whereby we apprehend they were not of the meanest carcasses, perfunctorily fired as sometimes in military, and commonly in pestilence, burnings; or after the manner of abject corps, hudled forth and carelesly burnt, without the Esquiline Port at *Rome*; which was an affront continued upon *Tiberius*, while they but half burnt his body *, and in the Amphitheatre, according to the custom in notable Malefactors; whereas *Nero* seemed not so much to fear his death, as that his head should be cut off, and his body not burnt entire.

Some finding many fragments of Sculls in these Urns, suspected a mixture of bones; In none we searched was there cause of such conjecture, though sometimes they declined not that practice; The Ashes of † *Domitian* were mingled with those of *Julia*; of *Achilles* with those of *Patroclus*: All Urns contained not single Ashes; without confused burnings they affectionately compounded their bones; passionately endeavouring to continue their living Unions. And when distance of Death denied such conjunctions, unsatisfied affections conceived some satisfaction to be neighbours in the grave, to lye Urn by Urn, and touch but in their Names. And many were so curious to continue their living Relations, that they contrived large, and Family-Urns, wherein the Ashes of their neerest Friends and Kindred might successively be received (*a*), at least some parcels thereof, while their collateral memorials lay in *minor* vessels about them.

Antiquity held too light thoughts from Objects of Mortality, while some drew provocatives of Mirth from Anatomies (*b*), and Juglers shewed Tricks with Skeletons. When Fidlers made not so pleasant mirth as Fencers, and men could sit with quiet Stomachs, while Hanging was plaied (*c*) before them.

Old considerations made few *Memento's* by Sculls and Bones upon their Monuments. In the Ægyptian Obelisks and Hieroglyphical Figures, it is not easie to meet with Bones. The Sepulchral Lamps speak nothing less than Sepulture; and in their literal draughts prove often obscene and antick pieces: Where we find *D. M.* * it is obvious to meet with sacrificing *Patera's*, and vessels of Libation, upon old Sepulchral Monuments. In the Jewish

Hypogæum

* Of *Beringuccio nulla pyrotechnia.*

† At *Elmeham.*

* Sueton. *in vitâ Tib. Et in Amphitheatro semiustulandum*, not. *Casaub.*

† *Sueton. in vitâ Domitian.*

(a) See the most learned and worthy Mr. *M. Casaubon* upon *Antoninus.*

(b) *Sic erimus cuncti*, &c. *Ergò dum vivimus vivamus.*

(c) Ἀσκωλιασμός. A barbarous Pastime at Feasts, when men stood upon a rolling Globe, with their Necks in a Rope; and a Knife in their Hands, ready to cut it when the Stone was rolled away, wherein if they failed, they lost their Lives, to the laughter of their Spectators. *Athenæus.*

* *Diis manibus.*

Hypogæum * and subterranean Cell at *Rome*, was little observable beside the variety of Lamps, and frequent draughts of the holy Candlestick. In authentick draughts of *Anthony* and *Jerome*, we meet with Thigh-bones and Deaths-heads; but the cemeterial Cells of ancient Christians and Martyrs, were filled with draughts of Scripture Stories; not declining the flourishes of Cypress, Palms, and Olive; and the mystical Figures of Peacocks, Doves and Cocks: But iterately affecting the Pourtraits of *Enoch*, *Lazarus*, *Jonas*, and the Vision of *Ezechiel*, as hopeful draughts, and hinting Imagery of the Resurrection; which is the life of the Grave, and sweetens our Habitations in the Land of Moles and Pismires.

* *Bosio.*

Gentile Inscriptions precisely delivered the extent of mens Lives, seldom the manner of their Deaths, which History it self so often leaves obscure in the Records of memorable persons. There is scarce any Philosopher but dies twice or thrice in *Laertius*; Nor almost any Life without two or three Deaths in *Plutarch*; which makes the tragical ends of noble persons more favourably resented by compassionate Readers, who find some relief in the Election of such Differences.

The certainty of Death is attended with uncertainties, in time, manner, places. The Variety of Monuments hath often obscured true Graves: and *Cenotaphs* confounded Sepulchres. For beside their real Tombs, many have found honorary and empty Sepulchres. The variety of *Homer*'s Monuments made him of various Countries. *Euripides* * had his Tomb in *Africa*, but his Sepulture in *Macedonia*. And *Severus* † found his real Sepulchre in *Rome*, but his empty Grave in *Gallia*.

* *Pausan. in Atticis.*
† Lamprid. *in vit.* Alexand. Severi.

He that lay in a golden Urn * eminently above the Earth, was not like to find the quiet of his bones. Many of these Urns were broke by a vulgar discoverer in hope of inclosed Treasure. The Ashes of *Marcellus* † were lost above ground, upon the like account. Where profit hath prompted, no Age hath wanted such Miners. For which the most barbarous Expilators found the most civil Rhetorick. Gold once out of the Earth is no more due unto it; What was unreasonably committed to the Ground, is reasonably resumed from it: Let Monuments and rich Fabricks, not Riches adorn Mens Ashes. The commerce of the Living is not to be transferred unto the Dead: It is not injustice to take that which none complains to lose, and no man is wronged where no man is Possessor.

* Trajanus. *Dion.*
† Plut. *in vit. Marcelli.*

The Commission of the *Gothish* King *Theodoric* for finding out sepulchral treasure. *Cassiodor. Var.* l. 4.

What Virtue yet sleeps in this *terra damnata* and aged Cinders, were petty Magick to experiment; These crumbling Reliques and long-fired Particles superannuate such Expectations: Bones, Hairs, Nails and Teeth of the Dead, were the Treasures of old Sorcerers. In vain we revive such practices; Present Superstition too visibly perpetuates the folly of our Fore-fathers, wherein unto old Observation this * Island was so compleat, that it might have instructed *Persia*.

* *Britannia hodie eam attonitè celebrat tantis ceremoniis, ut dedisse Persis videri possit.* Plin. l. 29.

Plato's Historian of the other world, lies twelve days incorrupted, while his Soul was viewing the large stations of the Dead. How to keep the Corps seven days from corruption by anointing and washing, without exenteration, were an hazardable piece of Art, in our choicest practice. How they made distinct separation of bones and ashes from fiery admixture, hath found no Historical Solution. Though they seemed to make a distinct collection, and overlooked not *Pyrrhus* his Toe. Some provision they might make by fictile Vessels, Coverings, Tiles, or flat Stones, upon and about the Body; And in the same Field, not far from these Urns, many stones were found under ground: as also by careful separation of extraneous matter, composing and raking up the burnt bones with forks, observable in that notable lump of *Galuanus Martianus* (*a*); who had the sight of the *Vas Ustrinum*, or Vessel wherein they burnt the Dead, found in the Esquiline Field at *Rome*, might have afforded clearer Solution. But their insatisfaction herein begat that remarkable Invention in the Funeral Pyres of some Princes, by incombustible Sheets made with a Texture of *Asbestos*, incremable Flax, or Salamanders Wooll, which preserved their Bones and Ashes (*b*) incommixed.

(*a*) *Typograph. Roma ex Martiano. Erat & vas ustrinum appellatum, quod in eo cadavera comburerentur.* Cap. *de Campo Esquilino.*
(*b*) To be seen *in Licet. de reconditis veterum lucernis.*

How the bulk of a Man ſhould ſink into ſo few pounds of Bones and Aſhes, may ſeem ſtrange unto any who conſiders not its conſtitution, and how ſlender a maſs will remain upon an open and urging fire of the carnal compoſition. Even Bones themſelves reduced into Aſhes, do abate a notable proportion. And conſiſting much of a volatile Salt, when that is fired out, make a light kind of Cinders. Although their bulk be diſproportionable to their weight, when the heavy principle of Salt is fired out, and the Earth almoſt only remaineth; Obſervable in Sallow, which makes more Aſhes than Oak; and diſcovers the common fraud of ſelling Aſhes by meaſure, and not by ponderation.

Some Bones make beſt Skeletons (*a*), ſome Bodies quick and ſpeedieſt Aſhes: Who would expect a quick flame from Hydropical *Heraclitus?* The poyſoned Soldier when his Belly brake, put out two Pyres in *Plutarch* (*b*). But in the Plague of *Athens* (*c*), one private Pyre ſerved two or three Intruders; and the *Saracens* burnt in large heaps, by the King of *Caſtile* (*d*), ſhewed how little Fuel ſufficeth. Though the Funeral-pyre of *Patroclus* took up an hundred foot (*e*), a piece of an old Boat burnt *Pompey*; And if the burthen of *Iſaac* were ſufficient for an Holocauſt, a Man may carry his own Pyre.

(*a*) Old bones according to *Lyſerus*. Thoſe of young Perſons not tall nor fat according to *Columbus*.
(*b*) *In vita* Graec.
(*c*) *Thucydides*.
(*d*) *Laurent. Valla*.
(*e*) Ἑκατόμπεδον ἔνθα ἢ ἔνθα.
* *Alb. Ovor.*
† The brain. *Hippocrates*.

From Animals are drawn good burning Lights, and good Medicines *against burning; Though the ſeminal humour ſeems of a contrary nature to fire, yet the body compleated proves a combuſtible lump, wherein fire finds flame even from bones, and ſome fuel almoſt from all parts. Though the † Metropolis of humidity ſeems leaſt diſpoſed unto it, which might render the Sculs of theſe Urns leſs burned than other Bones. But all flies or ſinks before fire almoſt in all bodies: When the common ligament is diſſolved, the attenuable parts aſcend, the reſt ſubſide in Coal, *Calx* or Aſhes.

To burn the Bones of the King of * *Edom* for Lyme, ſeems no irrational ferity; but to drink of the Aſhes of dead Relations †, a paſſionate prodigality. He that hath the Aſhes of his Friend, hath an everlaſting treaſure: where fire taketh leave, corruption ſlowly enters. In Bones well burnt, fire makes a wall againſt it ſelf; experimented in Copels, and teſts of Metals, which conſiſt of ſuch ingredients. What the Sun compoundeth, Fire analyſeth, not tranſmuteth. That devouring agent leaves almoſt always a morſel for the Earth, whereof all things are but a Colonie; and which, if time permits, the mother Element will have in their primitive maſs again.

* Amos 2. 1.
† As *Artemiſia* of her Huſband *Mauſolus*.

He that looks for Urns and old Sepulchral Reliques, muſt not ſeek them in the ruins of Temples: where no Religion anciently placed them. Theſe were found in a Field, according to ancient cuſtom, in noble or private Burial; the old practice of the *Canaanites*, the Family of *Abraham*, and the burying-place of *Joſhua*, in the borders of his poſſeſſions; and alſo agreeable unto *Roman* practice to bury by High-ways, whereby their Monuments were under Eye: Memorials of themſelves, and *Memento*'s of Mortality unto living paſſengers: whom the Epitaphs of great Ones were fain to beg to ſtay and look upon them. A Language though ſometimes uſed, not ſo proper in Church-Inſcriptions *. The ſenſible Rhetorick of the dead, to exemplarity of good life, firſt admitted the Bones of pious Men, and Martyrs within Church-walls; which in ſucceeding ages crept into promiſcuous practice. While *Conſtantine* was peculiarly favoured to be admitted unto the Church-Porch; and the firſt thus buried in *England* was in the days of *Cuthred*.

**Siſte viator.*

Kirkmannus de funer.

Chriſtians diſpute how their Bodies ſhould lie in the Grave. In Urnal interrment they clearly eſcaped this Controverſie: Though we decline the Religious conſideration, yet in cemeterial and narrower burying-places, to avoid confuſion and croſs poſition, a certain poſture were to be admitted; which even *Pagan* civility obſerved. The *Perſians* lay North and South: the *Megarians* and *Phœnicians* placed their Heads to the Eaſt: the *Athenians*, ſome think, towards the Weſt, which Chriſtians ſtill retain. And *Beda* will

will have it to be the posture of our Saviour: That he was crucified with his Face towards the West, we will not contend with tradition and probable account; but we applaud not the Hand of the Painter, in exalting his Cross so high above those on either side; since hereof we find no authentick account in History, and even the Crosses found by *Helena* pretend no such distinction from Longitude or Dimension.

To be knav'd out of our Graves, to have our Sculls made drinking-Bowls, and our Bones turned into Pipes, to delight and sport our Enemies, are Tragical abominations, escaped in burning Burials.

Urnal interrments, and burnt Reliques lie not in fear of Worms, or to be an heritage for Serpents. In carnal Sepulture, corruptions seem peculiar unto parts; and some speak of Snakes out of the Spinal-marrow. But while we suppose common Worms in Graves, 'tis not easie to find any there; few in Church-yards above a Foot-deep, fewer or none in Churches, though in fresh decaied Bodies. Teeth, Bones, and Hair, give the most lasting defiance to corruption. In an Hydropical body, ten years buried in a Church-yard, we met with a fat concretion, where the Nitre of the Earth, and the Salt and lixivious liquor of the body, had coagulated large lumps of Fat, into the consistence of the hardest Castle soap; whereof part remaineth with us. After a Battle with the *Persians* the *Roman* Corps decaied in few days, while the *Persian* bodies remained dry and uncorrupted. Bodies in the same Ground do not uniformly dissolve, nor Bones equally moulder; whereof in the opprobrious Disease we expect no long duration. The Body of the Marquess of *Dorset* seemed sound and handsomly cereclothed, that after Seventy eight years was found uncorrupted*. Common Tombs preserve not beyond Powder: A firmer consistence and compage of parts might be expected from Arefaction, deep Burial or Charcoal. The greatest Antiquities of Mortal bodies may remain in putrefied bones, whereof, though we take not in the Pillar of *Lot*'s Wife, or Metamorphosis of *Ortelius* †, some may be older than Pyramids, in the putrefied Reliques of the general Inundation. When *Alexander* opened the Tomb of *Cyrus*, the remaining bones discovered his proportion, whereof Urnal fragments afford but a bad conjecture, and have this disadvantage of Grave interrments, that they leave us ignorant of most personal discoveries. For since bones afford not only rectitude and stability, but figure unto the body; It is no impossible Physiognomy to conjecture at fleshy appendencies; and after what shape the Muscles and carnous parts might hang in their full consistences. A full spread *Cariola* shews a well-shaped Horse behind; handsome formed Sculls give some analogie of fleshy resemblance. A critical view of Bones makes a good distinction of Sexes. Even colour is not beyond conjecture; since it is hard to be deceived in the distinction of *Negro*'s Sculls. * *Dante*'s Characters are to be found in Sculls as well as Faces. *Hercules* is not only known by his Foot. Other parts make out their comproportions, and inferences upon whole or parts. And since the dimensions of the Head measure the whole Body, and the Figure thereof gives conjecture of the principal faculties; Physiognomy outlives our selves, and ends not in our Graves.

* Of *Thomas*, Marquess of *Dorset*, whose Body being buried 1530, was 1608. upon the cutting open of the Cereeloth found perfect and nothing corrupted, the flesh not hardened, but in colour, proportion, and softness like an ordinary Corps newly to be interred. *Burton*'s descript. of *Leicestershire*.

† In his Map of *Russia*.

* The Poet *Dante* in his view of Purgatory, found Gluttons so meagre, and extenuated, that he conceited them to have been in the Siege of *Jerusalem*, and that it was easie to have discovered *Homo* or *Omo* in their Faces: M being made by the two lines of their Cheeks, arching over the Eye-brows to the Nose, and their sunk Eyes making O O which makes up *Omo*. *Parean l'occhiaie anella senza gemme che nel viso de gli huomini legge huomo Ben'haurìa quivi conosciuto l' emme.*

Severe contemplators observing these lasting Reliques, may think them good Monuments of Persons past, little advantage to future beings. And considering that Power which subdueth all things unto it self, that can resume the scattered Atomes, or identifie out of any thing, conceive it superfluous to expect a resurrection out of Reliques. But the Soul subsisting, other matter clothed with due accidents, may salve the individuality: Yet the Saints we observe arose from Graves and Monuments, about the Holy City. Some think the ancient Patriarchs so earnestly desired to lay their bones

bones in *Canaan*, as hoping to make a part of that Reſurrection; and though thirty miles from Mount *Calvary*, at leaſt to lie in that Region, which ſhould produce the firſt-fruits of the dead. And if according to learned conjecture, the bodies of Men ſhall riſe where their greateſt Reliques remain, many are not like to err in the Topography of their Reſurrection, though their bones or bodies be after tranſlated by Angels into the field of *Ezechiel's* viſion, or as ſome will order it, into the Valley of Judgment, or *Jehoſaphat*.

Tirin. in Ezek.

CHAP. IV.

CHriſtians have handſomely gloſſed the deformity of death by careful conſideration of the body, and civil rites which take off brutal terminations: And though they conceived all reparable by a reſurrection, caſt not of all care of interrment. And ſince the Aſhes of Sacrifices burnt upon the Altar of God, were carefully carried out by the Prieſts, and depoſed in a clean field; ſince they acknowledged their bodies to be the lodging of Chriſt, and Temples of the Holy Ghoſt, they devolved not all upon the ſufficiency of Soul-exiſtence; and therefore with long Services and full Solemnities concluded their laſt Exequies, wherein * to all diſtinctions the *Greek* Devotion ſeems moſt pathetically ceremonious.

Chriſtian invention hath chiefly driven at Rites, which ſpeak hopes of another life, and hints of a Reſurrection. And if the ancient *Gentiles* held not the immortality of their better part, and ſome ſubſiſtence after death; in ſeveral rites, cuſtoms, actions and expreſſions, they contradicted their own opinions: wherein *Democritus* went high, even to the thought of a reſurrection (*a*), as ſcoffingly recorded by *Pliny*. What can be more expreſs than the expreſſion of *Phocylides* (*b*)? Or who would expect from *Lucretius* (*c*) a ſentence of *Eccleſiaſtes?* Before *Plato* could ſpeak, the Soul had wings in *Homer*, which fell not, but flew out of the body into the manſions of the dead; who alſo obſerved that handſome diſtinction of *Demas* and *Soma*, for the body conjoyned to the ſoul, and body ſeparated from it. *Lucian* ſpoke much truth in jeſt, when he ſaid, that part of *Hercules* which proceeded from *Alcmena* periſhed, that from *Jupiter* remained immortal. Thus (*d*) *Socrates* was content that his Friends ſhould bury his body, ſo they would not think they buried *Socrates*; and regarding only his immortal part, was indifferent to be burnt or buried. From ſuch Conſiderations, *Diogenes* might contemn Sepulture: And being ſatisfied that the Soul could not periſh, grow careleſs of corporal interrment. The *Stoicks*, who thought the Souls of wiſe Men had their habitation about the *Moon*, might make ſlight account of ſubterraneous depoſition; whereas the *Pythagoreans* and tranſcorporating Philoſophers, who were to be often buried, held great care of their interrment. And the *Platonicks* rejected not a due care of the Grave, though they put their aſhes to unreaſonable expectations, in their tedious term of return and long ſet revolution.

Men have loſt their reaſon in nothing ſo much as their Religion, wherein Stones and Clouts make Martyrs; and ſince the Religion of one ſeems madneſs unto another, to afford an account or Rational of old Rites, requires no rigid Reader. That they kindled the Pyre averſly, or turning their Face from it, was an handſome Symbol of unwilling miniſtration; That they waſhed their Bones with Wine and Milk, that the Mother wrapt them in Linnen, and dried them in her boſom, the firſt foſtering part, and place of their nouriſhment; That they opened their Eyes toward Heaven, before they kindled the fire, as the place of their hopes or original, were no improper Ceremonies. Their laſt valediction * thrice uttered by the attendants was alſo very ſolemn, and ſomewhat anſwered by Chriſtians, who thought it too little, if they threw not the Earth thrice upon the interred body.

* *Rituale Græcum, optrâ J. Goar, in officio exequiarum.*

(*a*) *Similis reviviſcendi promiſſa Democrito vanitas, qui non revixit ipſe. Quæ, malum, iſta dementia eſt! iteravi vitam morte.* Plin. l. 7. c. 55.

(*b*) Καὶ τάχα δ' ἐκ γαίης ἐλπίζομεθ' εἰς φάος ἐλθεῖν λεῖψαν ἀποιχομένων. *& deinceps.*

(*c*) *Cedit enim retro de terrâ quod fuit ante in terram,* &c. Lucret.

(*d*) *Plato in Phæd.*

* *Vale, vale, nos te ordine quo natura permittet ſequemur.*

body. That in ſtrewing their Tombs the *Romans* affected the Roſe, the *Greeks* Amaranthus and Myrtle; that the Funeral-pyre conſiſted of ſweet fuel, Cypreſs, Firr, Larix, Yew, and Trees perpetually verdant, lay ſilent expreſſions of their ſurviving hopes: Wherein Chriſtians which deck their Coffins with Bays, have found a more elegant Embleme; For that it ſeeming dead, will reſtore it ſelf from the Root, and its dry and exſuccous Leaves reſume their verdure again; which if we miſtake not, we have alſo obſerved in Furz. Whether the planting of Yew in Church-yards, hold not its Original from ancient Funeral-rites, or as an Embleme of Reſurrection, from its perpetual verdure, may alſo admit conjecture.

They made uſe of Muſick to excite or quiet the affections of their Friends, according to different harmonies: But the ſecret and ſymbolical hint was the harmonical nature of the Soul; which delivered from the body, went again to enjoy the Primitive harmony of Heaven, from whence it firſt deſcended; which according to its progreſs traced by Antiquity, came down by *Cancer*, and aſcended by *Capricornus*.

They burnt not Children before their Teeth appeared, as apprehending their bodies too tender a morſel for fire, and that their griſtly bones would ſcarce leave ſeparable reliques after the Pyral combuſtion. That they kindled not fire in their Houſes for ſome days after, was a ſtrict memorial of the late afflicting fire. And mourning without hope, they had an happy fraud againſt exceſſive lamentation, by a common opinion that deep ſorrows diſturbed their Ghoſts *.

* *Tu manes ne lade meos.*

That they buried their dead on their backs, or in a ſupine poſition, ſeems agreeable unto profound ſleep, and common poſture of dying; contrary to the moſt natural way of Birth; Nor unlike our pendulous poſture, in the doubtful ſtate of the Womb. *Diogenes* was ſingular, who preferred a prone ſituation in the Grave; and ſome Chriſtians * like neither, who decline the figure of reſt, and make choice of an erect poſture.

* *Ruſſians, &c.*

That they carried them out of the World with their Feet forward, not inconſonant unto reaſon: As contrary unto the native poſture of Man, and his production firſt into it. And alſo agreeable unto their opinions, while they bid adieu unto the World, not to look again upon it; whereas *Mahometans* who think to return to a delightful life again, are carried forth with their Heads forward, and looking toward their Houſes.

They cloſed their Eyes, as parts which firſt die, or firſt diſcover the ſad effects of death. But their iterated clamations to excitate their dying or dead Friends, or revoke them unto life again, was a vanity of affection; as not preſumably ignorant of the critical teſts of death, by appoſition of Feathers, Glaſſes, and reflexion of Figures, which dead Eyes repreſent not; which however not ſtrictly verifiable in freſh and warm *cadavers*, could hardly elude the teſt, in Corps of four or five days.

That they ſuck'd in the laſt breath of their expiring Friends, was ſurely a practice of no medical inſtitution, but a looſe opinion that the Soul paſſed out that way, and a fondneſs of affection from ſome * *Pythagorical* foundation, that the ſpirit of one Body paſſed into another; which they wiſhed might be their own.

* *Franceſco Perucci, Pompe funebri.*

That they poured Oyl upon the Pyre, was a tolerable practice, while the intention reſted in facilitating the accenſion; But to place good *Omens* in the quick and ſpeedy burning, to ſacrifice unto the Winds for a diſpatch in this office, was a low form of ſuperſtition.

The *Archimime* or *Jeſter* attending the Funeral-train, and imitating the ſpeeches, geſture, and manners of the deceaſed, was too light for ſuch ſolemnities, contradicting their Funeral Orations, and Doleful Rites of the Grave.

That they buried a piece of Mony with them as a Fee of the *Elyſian Ferriman*, was a practice full of folly. But the ancient cuſtom of placing Coyns in conſiderable Urns, and the preſent practice of burying Medals in the Noble Foundations of *Europe*, are laudable ways of Hiſtorical diſcoveries, in Actions, Perſons, Chronologies; and poſterity will applaud them.

We

We examine not the old Laws of Sepulture, exempting certain Persons from burial or burning. But hereby we apprehend that these were not the Bones of Persons Planet-struck or burnt with fire from Heaven: No Reliques of Traitors to their Country, Self-killers, or Sacrilegious Malefactors; Persons in old apprehension unworthy of the *Earth*; condemned unto the *Tartara*'s of Hell, and bottomless pit of *Plato*, from whence there was no redemption.

Nor were only many Customs questionable in order to their Obsequies, but also sundry practices, fictions, and conceptions, discordant or obscure, of their state and future beings; whether unto eight or ten bodies of Men to add one of a Woman, as being more inflammable, and unctuously constituted for the better Pyral combustion, were any rational practice: Or whether the complaint of *Periander*'s Wife be tolerable, that wanting her Funeral burning she suffered intolerable cold in Hell, according to the constitution of the Infernal House of *Plato*, wherein cold makes a great part of their tortures; it cannot pass without some question.

Why the Female Ghosts appear unto *Ulysses*, before the *Heroes* and masculine spirits; Why the *Psyche* or Soul of *Tiresias* is of the Masculine gender; who being blind on Earth sees more than all the rest in Hell; Why the Funeral Suppers consisted of Eggs, Beans, Smallage, and Lettuce, since the dead are made to eat *Asphodels* about the *Elyzian* Meadows; Why since there is no Sacrifice acceptable, nor any propitiation for the Covenant of the Grave, Men set up the Deity of *Morta*, and fruitlesly adored Divinities without Ears; it cannot escape some doubt.

The dead seem all alive in the humane *Hades* of *Homer*, yet cannot well speak, propheſie, or know the living, except they drink blood, wherein is the life of Man. And therefore the Souls of *Penelope*'s Paramours, conducted by *Mercury* chirped like Bats, and those which followed *Hercules* made a noise but like a flock of Birds.

The departed spirits know things past and to come, yet are ignorant of things present. *Agamemnon* foretels what should happen unto *Ulysses*, yet ignorantly enquires what is become of his own Son. The Ghosts are afraid of Swords in *Homer*, yet *Sibylla* tells *Æneas* in *Virgil*, the thin habit of Spirits was beyond the force of weapons. The Spirits put off their malice with their bodies, and *Cæsar* and *Pompey* accord in *Latine* Hell, yet *Ajax* in *Homer* endures not a conference with *Ulysses*: And *Deiphobus* appears all mangled in *Virgil*'s Ghosts, yet we meet with perfect shadows among the wounded Ghosts of *Homer*.

Since *Charon* in *Lucian* applauds his condition among the dead, whether it be handsomly said of *Achilles*, that living contemner of death, that he had rather be a Plowmans servant than Emperor of the dead? How *Hercules* his Soul is in Hell, and yet in Heaven, and *Julius* his Soul in a Star, yet seen by *Æneas* in Hell, except the Ghosts were but Images and Shadows of the Soul, received in higher mansions, according to the ancient division of Body, Soul, and Image or *Simulachrum* of them both The particulars of future beings must needs be dark unto ancient Theories, which Christian Philosophy yet determines but in a Cloud of opinions. A Dialogue betweeen two Infants in the Womb concerning the state of this World, might handsomly illustrate our ignorance of the next, whereof methinks we yet Discourse in *Plato*'s den, and are but *Embryon* Philosophers.

* *Del inferno. cant.* 4. *Pythagoras* escapes in the fabulous Hell of *Dante**, among that swarm of Philosophers, wherein whilst we meet with *Plato* and *Socrates*, *Cato* is to be found in no lower place than Purgatory. Among all the sett, *Epicurus* is most considerable, whom Men make honest without an *Elyzium*, who contemned life without encouragement of immortality, and making nothing after death, yet made nothing of the King of terrors.

Were the happiness of the next World as closely apprehended as the felicities of this, it were a Martyrdom to live; and unto such as consider none hereafter, it must be more than death to die, which makes us amazed at those audacities, that durst be nothing, and return into their *Chaos* again,

Cer-

Certainly ſuch ſpirits as could contemn death, when they expected no better being after, would have ſcorned to live, had they known any. And therefore we applaud not the judgment of *Machiavel*, that Chriſtianity makes Men cowards, or that with the confidence of but half dying, the deſpiſed virtues of patience and humility, have abaſed the ſpirits of Men, which *Pagan* principles exalted; but rather regulated the wildneſs of audacities, in the attempts, grounds, and eternal ſequels of death; wherein Men of the boldeſt ſpirits are often prodigiouſly temerarious. Nor can we extenuate the valour of ancient Martyrs, who contemned death in the uncomfortable ſcene of their lives, and in their decrepit Martyrdoms did probably loſe not many months of their days, or parted with life when it was ſcarce worth the living. For (beſide that long time paſt holds no conſideration unto a ſlender time to come) they had no ſmall diſadvantage from the conſtitution of old age, which naturally makes Men fearful, and complexionally ſuperannuated from the bold and couragious thoughts of youth and fervent years. But the contempt of death from corporal animoſity, promoteth not our felicity. They may ſit in the *Orcheſtra*, and nobleſt Seats of Heaven, who have held up ſhaking hands in the fire, and humanly contended for Glory.

Mean while *Epicurus* lies deep in *Dante*'s Hell, wherein we meet with Tombs encloſing Souls which denied their immortalities. But whether the virtuous Heathen, who lived better than he ſpake, or erring in the principles of himſelf, yet lived above Philoſophers of more ſpecious Maximes, lye ſo deep as he is placed, at leaſt ſo low as not to riſe againſt Chriſtians, who believing or knowing that truth, have laſtingly denied it in their practice and converſation, were a quæry too ſad to inſiſt on.

But all or moſt apprehenſions reſted in Opinions of ſome future being, which ignorantly or coldly believed, begat thoſe perverted Conceptions, Ceremonies, Sayings, which Chriſtians pity or laugh at. Happy are they, which live not in that diſadvantage of time, when Men could ſay little for futurity, but from reaſon. Whereby the nobleſt minds fell often upon doubtful deaths, and melancholy Diſſolutions; With theſe hopes *Socrates* warmed his doubtful ſpirits, againſt that cold potion; and *Cato* before he durſt give the fatal ſtroak, ſpent part of the Night in reading the immortality of *Plato*, thereby confirming his wavering hand unto the animoſity of that attempt.

It is the heavieſt Stone that melancholy can throw at a Man, to tell him he is at the end of his nature; or that there is no further ſtate to come, unto which this ſeems progreſſional, and otherwiſe made in vain; Without this accompliſhment the natural expectation and deſire of ſuch a ſtate, were but a fallacy in nature; unſatisfied Conſiderators would quarrel the juſtice of their conſtitutions, and reſt content that *Adam* had fallen lower, whereby by knowing no other Original, and deeper ignorance of themſelves, they might have enjoyed the happineſs of inferiour Creatures; who in tranquillity poſſeſs their Conſtitutions, as having not the apprehenſion to deplore their own Natures. And being framed below the circumference of theſe hopes, or cognition of better being, the Wiſdom of God hath neceſſitated their Contentment. But the ſuperiour ingredient and obſcured part of our ſelves, whereto all preſent felicities afford no reſting contentment, will be able at laſt to tell us we are more than our preſent ſelves; and evacuate ſuch hopes in the fruition of their own accompliſhments.

CHAP. V.

NOW since these dead bones have already out-lasted the living ones of *Methuselah*, and in a Yard under Ground, and thin Walls of Clay, out-worn all the strong and specious buildings above it; and quietly rested under the drums and tramplings of three Conquests; What Prince can promise such diuturnity unto his Reliques, or might not gladly say,

* *Tibullus.* * *Sic ego componi versus in ossa velim?*

Time which antiquates Antiquities, and hath an art to make dust of all things, hath yet spared these *minor* Monuments. In vain we hope to be known by open and visible Conservatories, when to be unknown was the means of their continuation, and obscurity their protection: If they died by violent hands, and were thrust into their Urns, these bones become considerable, and some old Philosophers would honour (*a*) them, whose Souls they conceived most pure, which were thus snatched from their Bodies; and to retain a stronger propension unto them: whereas they weariedly left a languishing Corps, and with faint desires of re-union. If they fell by long and aged decay, yet wrapt up in the bundle of time, they fall into indistinction, and make but one blot with Infants. If we begin to die when we live, and long life be but a prolongation of death; our life is a sad composition; We live with death, and die not in a moment. How many Pulses made up the life of *Methuselah*, were work for *Archimedes:* Common Counters summ up the life of *Moses* his Man (*b*). Our days become considerable like petty summs by minute accumulations; where numerous fractions make up but small round numbers; and our days of a span long make not one little Finger (*c*).

(*a*) *Oracula Chaldaica cum scholiis Pselli & Pothonis.* Βίη λιπόντων σῶμα ψυχαὶ καθαρώτατοι. *Vi corpus relinquentium animæ purissimæ.*

(*b*) In the Psalm of *Moses.*

(*c*) According to the ancient Arithmetick of the hand, wherein the little Finger of the right Hand contracted, signified an hundred. *Pierius in Hieroglyph.*

If the nearness of our last necessity, brought a nearer conformity unto it, there were a happiness in hoary Hairs, and no calamity in half senses. But the long habit of living indisposeth us for dying; When Avarice makes us the sport of death; When even *David* grew politickly cruel; and *Solomon* could hardly be said to be the wisest of Men. But many are too early old, and before the date of age. Adversity stretcheth our days, misery makes (*d*) *Alcmena*'s Nights, and time hath no wings unto it. But the most tedious Being is that which can unwish it self, content to be nothing, or never to have been, which was beyond the Male-content of *Job*, who cursed not the day of his Life, but his Nativity: Content to have so far been, as to have a Title to future being; Although he had lived here but in an hidden state of life, and as it were an abortion.

(*d*) One Night as long as three.

What Song the *Syrens* sang, or what name *Achilles* assumed when he hid himself among Women, though puzling Questions, are not beyond all conjecture. What time the Persons of these Ossuaries entred the * *famous Nation of the dead*, and slept with Princes and Counsellors, might admit a wide solution. But who were the proprietaries of these bones, or what bodies these ashes made up, were a question above Antiquarism. Not to be resolved by Man, nor easily perhaps by Spirits, except we consult the Provincial Guardians, or Tutelary Observators. Had they made as good provision for their Names, as they have done for their Reliques, they had not so grosly erred in the art of perpetuation. But to subsist in bones, and be but Pyramidally extant, is a fallacy in duration. Vain ashes, which in the oblivion of Names, Persons, Times, and Sexes, have found unto themselves a fruitless continuation, and only arise unto late posterity, as Emblems of mortal vanities; Antidotes against pride, vain-glory, and madding vices. *Pagan* vain glories which thought the World might last for ever, had encouragement for ambition, and finding no *Atropos* unto the immortality of their Names, were never dampt with the necessity of oblivion. Even old am-

The puzling questions of *Tiberius* unto *Grammarians. Marcel. Donatus in Suet.*

* Κλυτὰ ἔθνεα νεκρῶν. *Hom. Od.*

ambitions had the advantage of ours, in the attempts of their vain-glories, who acting early and before the probable Meridian of time, have by this time found great accomplishment of their designs, whereby the ancient *Heroes* have already out-lasted their Monuments, and Mechanical preservations. But in this latter Scene of time we cannot expect such Mummies unto our memories, when ambition may fear the Prophecy of *Elias* *, and *Charles* the Fifth can never hope to live within two *Methuselah*'s of *Hector* †.

And therefore restless inquietude for the diuturnity of our memories unto present considerations, seems a vanity almost out of date, and superannuated piece of folly. We cannot hope to live so long in our Names, as some have done in their Persons, one Face of *Janus* holds no proportion unto the other. 'Tis too late to be ambitious. The great mutations of the World are acted, or time may be too short for our designs. To extend our memories by Monuments, whose death we daily pray for, and whose duration we cannot hope, without injury to our expectations in the advent of the last day, were a contradiction to our beliefs. We whose Generations are ordained in this setting part of time, are providentially taken off from such imaginations. And being necessitated to eye the remaining particle of futurity, are naturally constituted unto thoughts of the next World, and cannot excusably decline the consideration of that duration, which maketh Pyramids Pillars of Snow, and all that's past a moment.

Circles and right lines limit and close all bodies, and the mortal right-lined Circle *, must conclude and shut up all. There is no Antidote against the *Opium* of Time, which temporally considereth all things; Our Fathers find their Graves in our short memories, and sadly tell us how we may be buried in our Survivors. Grave-stones tell truth scarce forty years †: Generations pass while some Trees stand, and old Families last not three Oaks. To be read by bare Inscriptions like many in *Gruter* *, to hope for Eternity by Ænigmatical Epithetes, or first Letters of our Names, to be studied by Antiquaries, who we were, and have new Names given us like many of the Mummies, are cold consolations unto the Students of perpetuity, even by everlasting Languages.

To be content that Times to come should only know there was such a Man, not caring whether they knew more of him, was a frigid ambition in *Cardan* †: disparaging his Horoscopal inclination and judgment of himself. Who cares to subsist like *Hippocrates*'s Patients, or *Achilles*'s Horses in *Homer*, under naked nominations, without deserts and noble acts, which are the Balsam of our memories, the *Entelechia* and Soul of our subsistences? To be nameless in worthy deeds, exceeds an infamous History. The *Canaanitish* Woman lives more happily without a Name, than *Herodias* with one. And who had not rather have been the good Thief, than *Pilate*?

But the iniquity of oblivion blindly scattereth her Poppy, and deals with the memory of Men without distinction to merit of perpetuity. Who can but pity the Founder of the Pyramids? *Herostratus* lives that burnt the Temple of *Diana*, he is almost lost that built it; Time hath spared the Epitaph of *Adrian*'s Horse, confounded that of himself. In vain we compute our felicities by the advantage of our good Names, since bad have equal durations; and *Thersites* is like to live as long as *Agamemnon*, without the favour of the everlasting Register: Who knows whether the best of Men be known? or whether there be not more remarkable Persons forgot, than any that stand remembred in the known account of Time? the first Man had been as unknown as the last, and *Methuselah*'s long life had been his only Chronicle.

Oblivion is not to be hired: The greater part must be content to be as though they had not been, to be found in the Register of God, not in the Record of Man. Twenty seven Names make up the first Story, and the recorded Names ever since contain not one living Century. The number of the dead long exceedeth all that shall live. The night of Time far surpasseth the day, and who knows when was the Æquinox? Every hour adds unto that current Arithmetick, which scarce stands one moment. And since

* That the World may last but six thousand years.

† *Hector*'s fame lasting above two lives of *Methuselah*, before that famous Prince was extant.

* ⊖ The Character of death.

† Old ones being taken up, and other bodies laid under them.

* *Gruteri Inscriptiones Antiquæ.*

† *cupierem notum esse quid sim, non opto ut sciatur qualis sim.* Card. *in vita propria.*

ſince death muſt be the *Lucina* of life, and even *Pagans* could doubt whether thus to live, were to die; Since our longeſt Sun ſets at right deſcenſions, and makes but Winter arches, and therefore it cannot be long before we lie down in darkneſs, and have our light in aſhes; Since the Brother of death daily haunts us with dying *Memento*'s, and Time that grows old it ſelf, bids us hope no long duration: Diuturnity is a dream and folly of expectation.

Darkneſs and light divide the courſe of time, and oblivion ſhares with memory, a great part even of our living beings; we ſlightly remember our felicities, and the ſmarteſt ſtroaks of affliction leave but ſhort ſmart upon us. Senſe endureth no extremities, and ſorrows deſtroy us or themſelves. To weep into Stones are fables. Afflictions induce calloſities, miſeries are ſlippery, or fall like Snow upon us, which notwithſtanding is no unhappy ſtupidity. To be ignorant of evils to come, and forgetful of evils paſt, is a merciful proviſion in nature, whereby we digeſt the mixture of our few and evil days; and our delivered ſenſes not relapſing into cutting remembrances, our ſorrows are not kept raw by the edge of repetitions. A great part of Antiquity contented their hopes of ſubſiſtency with a tranſmigration of their Souls. A good way to continue their memories, while having the advantage of plural ſucceſſions, they could not but act ſomething remarkable in ſuch variety of beings, and enjoying the fame of their paſſed ſelves, make accumulation of Glory unto their laſt durations. Others rather than be loſt in the uncomfortable night of nothing, were content to recede into the common being, and make one Particle of the publick Soul of all things, which was no more than to return into their unknown and divine Original again. *Ægyptian* ingenuity was more unſatisfied, contriving their bodies in ſweet conſiſtences, to attend the return of their Souls. But all was vanity, feeding * the wind, and folly. The *Ægyptian* Mummies, which *Cambyſes* or time hath ſpared, avarice now conſumeth. Mummy is become Merchandiſe, *Mizraim* cures wounds, and *Pharaoh* is ſold for Balſams.

* *Omnia vanitas & paſtio venti,* νομὴ ἀνέμου καὶ βόσκησις, *ut olim Aquila & Symmachus.* V. Druſ. *Eccleſ.*

In vain do Individuals hope for Immortality, or any Patent from Oblivion, in preſervations below the Moon: Men have been deceived even in their flatteries above the Sun, and ſtudied conceits to perpetuate their names in Heaven. The various Coſmography of that part hath already varied the names of contrived Conſtellations; *Nimrod* is loſt in *Orion*, and *Oſyris* in the *Dog-ſtar*. While we look for incorruption in the Heavens, we find they are but like the Earth; Durable in their main bodies, alterable in their parts: whereof beſide Comets and new Stars, Perſpectives begin to tell tales. And the ſpots that wander about the Sun, with *Phaeton*'s favour, would make clear conviction.

There is nothing ſtrictly immortal, but immortality; whatever hath no beginning, may be confident of no end. All others have a dependent being, and within the reach of deſtruction, which is the peculiar of that neceſſary Eſſence that cannot deſtroy it ſelf; And the higheſt ſtrain of Omnipotency to be ſo powerfully conſtituted, as not to ſuffer even from the power of it ſelf. But the ſufficiency of Chriſtian Immortality fruſtrates all earthly glory, and the quality of either ſtate after death, makes a folly of poſthumous memory. God who can only deſtroy our Souls, and hath aſſured our Reſurrection, either of our bodies or names hath directly promiſed no duration. Wherein there is ſo much of chance, that the boldeſt Expectants have found unhappy fruſtration; and to hold long ſubſiſtence, ſeems but a ſcape in Oblivion. But Man is a Noble Animal, ſplendid in Aſhes, and pompous in the Grave, ſolemnizing Nativities and Deaths with equal luſtre, nor omitting Ceremonies of bravery in the infamy of his Nature.

Life is a pure flame, and we live by an inviſible Sun within us. A ſmall fire ſufficeth for life, great flames ſeemed too little after death, while Men vainly affected precious Pyres, and to burn like *Sardanapalus*: but the wiſdom of funeral Laws found the folly of prodigal blazes, and reduced undoing

doing fires unto the rule of ſober obſequies, wherein few could be ſo mean as not to provide Wood, Pitch, a Mourner, and an Urn.

Five Languages ſecured not the Epitaph of *Gordianus*; The Man of God lives longer without a Tomb than any by one, inviſibly interred by Angels, and adjudged to obſcurity, though not without ſome marks directing human diſcovery. *Enoch* and *Elias* without either Tomb or Burial, in an anomalous ſtate of being, are the great Examples of perpetuity, in their long and living memory, in ſtrict account being ſtill on this ſide death, and having a late part yet to act upon this Stage of Earth. If in the decretory term of the World we ſhall not all die but be changed, according to received tranſlation; the laſt day will make but few Graves; at leaſt quick Reſurrections will anticipate laſting Sepultures. Some Graves will be opened before they be quite cloſed, and *Lazarus* be no wonder. When many that feared to die, ſhall groan that they can die but once, the diſmal ſtate is the ſecond and living death, when life puts deſpair on the damned; when Men ſhall wiſh the coverings of Mountains, not of Monuments, and Annihilation ſhall be courted.

While ſome have ſtudied Monuments, others have ſtudiouſly declined them: and ſome have been ſo vainly boiſterous, that they durſt not acknowledge their Graves; wherein * *Alaricus* ſeems moſt ſubtle, who had a River turned to hide his bones at the bottom. Even *Sylla* that thought himſelf ſafe in his Urn, could not prevent revenging Tongues, and Stones thrown at his Monument. Happy are they whom privacy makes innocent, who deal ſo with Men in this World, that they are not afraid to meet them in the next; who when they die, make no commotion among the dead, and are not toucht with that poetical taunt of *Iſaiah* †.

* *Jornandes de rebus Geticis.*

† Iſa. 14.

Pyramids, *Arches*, *Obeliſks*, were but the irregularities of vain-glory, and wild enormities of ancient magnanimity. But the moſt magnanimous reſolution reſts in the Chriſtian Religion, which trampleth upon pride, and ſits on the neck of ambition, humbly purſuing that infallible perpetuity, unto which all others muſt diminiſh their Diameters, and be poorly ſeen in Angles of contingency *.

* *Angulus contingentiæ*, the leaſt of Angles.

Pious Spirits who paſſed their days in raptures of futurity, made little more of this World, than the World that was before it, while they lay obſcure in the Chaos of pre-ordination, and night of their fore-beings. And if any have been ſo happy as truly to underſtand Chriſtian Annihilation, Ecſtaſies, Exolution, Liquefaction, Tranſformation, the kiſs of the Spouſe, guſtation of God, and ingreſſion into the Divine ſhadow, they have already had an handſom anticipation of Heaven; the glory of the World is ſurely over, and the Earth in aſhes unto them.

To ſubſiſt in laſting Monuments, to live in their productions, to exiſt in their names, and prædicament of *Chimæra*'s, was large ſatisfaction unto old expectations, and made one part of their *Elyziums*. But all this is nothing in the Metaphyſicks of true belief. To live indeed, is to be again our ſelves, which being not only an hope but an evidence in noble Believers. 'Tis all one to lie in S. *Innocent*'s † Church-yard, as in the Sands of *Ægypt*: Ready to be any thing, in the ecſtaſie of being ever, and as content with ſix Foot as the Moles of *Adrianus* *.

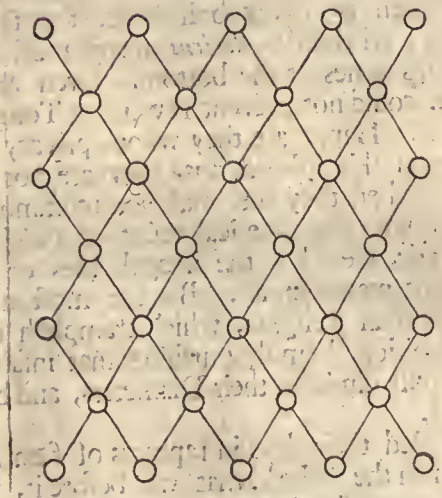
† In *Paris*, where Bodies ſoon conſume.

* A ſtately *Mauſoleum* or Sepulchral-pyle built by *Adrianus* in *Rome*, where now ſtandeth the Caſtle of S. *Angelo*.

Lucan.

——*Tabeſne cadavera ſolvat,*
An rogus, haud refert.——

THE



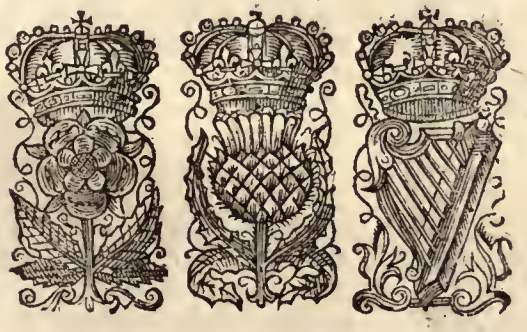
Quid Quincunce speciosius, qui, in quam cunq; partem spectaueris, rectus est: Quintilian:

THE GARDEN OF CYRUS.

OR,

The Quincuncial, Lozenge, or Net-work Plantations of the Ancients, Artificially, Naturally, Mystically Considered.

By *THOMAS BROWN*, Dr. of Physick.



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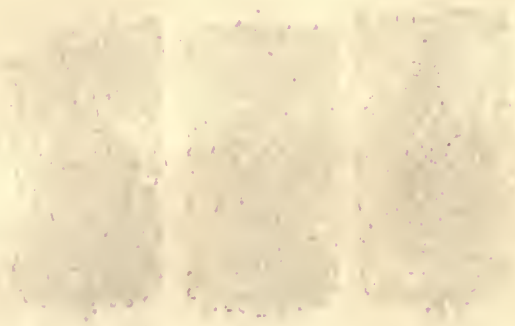


THE GARDEN of CYRUS,

OR,

The Quincuncial, Lozenge, or Net-work Plantations of the Ancients, Artificially, Naturally, Mystically considered.

CHAPTER I.

THat *Vulcan* gave Arrows unto *Apollo* and *Diana* the fourth day after their Nativities, (according to Gentile Theology, may pass for no blind apprehension of the Creation of the Sun and Moon, in the work of the fourth day; When the diffused Light contracted into Orbs, and shooting Rayes of those Luminaries. Plainer Descriptions there are from Pagan Pens, of the Creatures of the fourth day; While the * Divine Philosopher unhappily omitteth the noblest part of the third; And *Ovid* (whom many conceive to have borrowed his Description from *Moses*) coldly deserting the remarkable account of the Text, in three words † describeth this work of the third day; the Vegetable Creation, and first ornamental Scene of Nature; the primitive food of Animals, and first story of Physick in Dietetical conservation.

* *Plato in Timæo.*

† *Fronde tegi silvas.*

For though Physick may plead high, from that medical act of God, in casting so deep a sleep upon our first Parent; And Chirurgery * find its whole Art, in that one passage concerning the Rib of *Adam*: yet is there no rivality with Garden-contrivance and Herbery. For if Paradise were planted the third day of the Creation, as wiser Divinity concludeth, the Nativity thereof was too early for Horoscopie; Gardens were before Gardiners, and but some hours after the Earth.

* διαίρεσις, in opening the flesh; ἐξαίρεσις, in taking out the rib; σύνθεσις, in closing up the part again.

Of deeper doubt is its Topography, and local designation: yet being the primitive Garden, and without much † controversie seated in the East; it is more than probable, the first curiosity, and cultivation of Plants, most flourished in those quarters. And since the Ark of *Noah* first toucht upon some Mountains of *Armenia*, the planting Art arose again in the East, and found its revolution not far from the place of its Nativity, about the Plains of those Regions. And if *Zoroaster* were either *Cham*, *Chus*, or *Mizraim*, they were early Proficients therein, who left (as *Pliny* delivereth) a work of Agriculture.

† For some there is from the ambiguity of the word *Mikedem*, whether *ab Oriente*, or *a principio.*

However the account of the Penſile or hanging Gardens of *Babylon*, if made by *Semiramis*, the third or fourth from *Nimrod*, is of no ſlender antiquity; which being not framed upon ordinary level of ground, but raiſed upon pillars, admitting under-paſſages, we cannot accept as the firſt *Babylonian* Gardens; But a more eminent progreſs and advancement in that Art, than any that went before it: Somewhat anſwering or hinting the old Opinion concerning Paradiſe it ſelf, with many conceptions elevated above the plane of the Earth.

Nebuchodonoſor, whom ſome will have to be the famous *Syrian* King of *Diodorus*, beautifully repaired that City; and ſo magnificently built his * hanging Gardens, that from ſucceeding Writers he had the honour of the firſt. From whence over-looking *Babylon*, and all the Region about it, he found no circumſcription to the eye of his ambition; till over-delighted with the bravery of this Paradiſe; in his melancholy Metamorphoſis, he found the folly of that delight, and a proper puniſhment, in the contrary Habitation, in wild Plantations and wandrings of the Fields.

* *Joſephus.*

The *Perſian* Gallants who deſtroyed this Monarchy, maintained their Botanical bravery. Unto whom we owe the very Name of Paradiſe: wherewith we meet not in Scripture before the time of *Solomon*, and conceived originally *Perſian*. The word for that diſputed Garden, expreſſing in the Hebrew no more than a Field encloſed, which from the ſame Root is content to derive a Garden and a Buckler.

Cyrus the elder, brought up in Woods and Mountains, when time and power enabled, purſued the dictate of his education, and brought the Treaſures of the Field into rule and circumſcription. So nobly beautifying the hanging Gardens of *Babylon*, that he was alſo thought to be the Author thereof.

Ahaſuerus (whom many conceive to have been *Artaxerxes Longimanus*) in the * Country and City of Flowers, and in an open Garden, entertained his Princes and people, while *Vaſti* more modeſtly treated the Ladies within the Palace thereof.

* *Suſhan* in *Suſiana.*

Plutarch in the Life of *Artaxerxes.*

But if (as ſome opinion) King *Ahaſuerus* were *Artaxerxes Mnemon*, that found a Life and Reign anſwerable unto his great Memory, our magnified *Cyrus* was his ſecond Brother: who gave the occaſion of that memorable Work, and almoſt miraculous retrait of *Xenophon*. A perſon of high Spirit and Honour, naturally a King, though fatally prevented by the harmleſs chance of *poſt*-geniture: Not only a Lord of Gardens, but a manual Planter thereof: diſpoſing his Trees like his Armies in regular ordination. So that while old *Laertes* hath found a Name in *Homer* for pruning Hedges, and clearing away thorns and briars; while King *Attalus* lives for his poiſonous Plantations of Aconites, Henbane, Hellebore, and Plants hardly admitted within the walls of Paradiſe; While many of the Ancients do poorly live in the ſingle Names of Vegetables; All ſtories do look upon *Cyrus*, as the ſplendid and regular Planter.

Xenophon *in Oeconomico.*

According whereto *Xenophon* deſcribeth his gallant Plantation at *Sardis*, thus rendred by *Strebæus*. * *Arbores, pari intervallo ſitas, rectos ordines & omnia perpulchrè in Quincuncem directa.* Which we ſhall take for granted as being accordingly rendred by the moſt elegant of the † *Latines*; and by no made term, but in uſe before by *Varro*. That is, the rows and orders ſo handſomly diſpoſed; or five Trees ſo ſet together, that a regular angularity, and thorough proſpect, was left on every ſide. Owing this Name not only unto the Quintuple number of Trees, but the figure declaring that number, which being doubled at the angle, makes up the Letter X, that is the Emphatical decuſſation, or fundamental figure.

* Καλὰ μὲν τὰ δένδρεα, δι' ἴσης δὲ τὰ πρυτευόμενα, ὀρθοὶ δὲ οἱ τίχοι τῶν δένδρεων, εὐδαίμονα δὲ πάντα χαλῶς.

† Cicero *in Cat. Major.*

Now though in ſome ancient and modern practice the *Area* or decuſſated Plot, might be a perfect ſquare, anſwerable to a *Tuſcan Pedeſtal*, and the *Quinquernio* or Cinque point of a Dye; wherein by Diagonal lines the interſection was regular; accommodable unto Plantations of large growing Trees; and we muſt not deny our ſelves the advantage of this order: yet ſhall we chiefly inſiſt upon that of * *Curtius* and *Porta*, in their brief deſcription

* Benedict. Curtius *de* Horti. Bapt. Porta *in villa.*

ſcription hereof. Wherein the *decuſſis* is made within a longilateral ſquare, with oppoſite angles, acute and obtuſe at the interſection; and ſo upon progreſſion making a *Rhombus* or Lozenge figuration, which ſeemeth very agreeable unto the Original Figure. Anſwerable whereunto we obſerve the decuſſated Characters in many Conſulary Coins, and even in thoſe of *Conſtantine* and his Sons, which pretend their Pattern in the Sky; the crucigerous Enſign carried this figure, not tranſverſly or rectangularly interſected, but in a decuſſation, after the form of an *Andrean* or *Burgundian* Croſs, which anſwereth this deſcription.

Where by the way we ſhall decline the old Theme, ſo traced by Antiquity, of Croſſes and Crucifixion: Whereof ſome being right, and of one ſingle piece without tranſverſion or tranſome, do little advantage our ſubject. Nor ſhall we take in the myſtical *Tau*, or the Croſs of our bleſſed Saviour, which having in ſome deſcriptions an *Empedon* or croſſing footſtay, made not one ſingle tranſverſion. And ſince the Learned *Lipſius* hath made ſome doubt even of the Croſs of St. *Andrew*, ſince ſome Martyrological Hiſtories deliver his Death by the general Name of a Croſs, and *Hippolytus* will have him ſuffer by the Sword; we ſhould have enough to make out the received Croſs of that Martyr. Nor ſhall we urge the *Labarum*, and famous Standard of *Conſtantine*, or make further uſe thereof, than as the firſt Letters in the Name of our Saviour Chriſt, in uſe among Chriſtians, before the days of *Conſtantine*, to be obſerved in * Sepulchral Monuments of Martyrs, in the Reign of *Adrian*, and *Antoninus*; and to be found in the Antiquities of the Gentiles, before the Advent of Chriſt, as in the Medal of King *Ptolomy*, ſigned with the ſame Characters, and might be the beginning of ſome Word or Name, which Antiquaries have not hit on.

* Of *Marius*, *Alexander*. *Roma Sotterranea*.

We will not revive the myſterious Croſſes of *Ægypt*, with Circles on their Heads, in the Breaſt of *Serapis*, and the hands of their Genial Spirits, not unlike the character of *Venus*, and looked on by ancient Chriſtians, with relation unto Chriſt. Since however they firſt began, the Ægyptians thereby expreſſed the proceſs and motion of the Spirit of the World, and the diffuſion thereof upon the Celeſtial and Elemental Nature; imployed by a circle and right-lined interſection. A ſecret in their Teleſmes and magical Characters among them. Though he that conſidereth the * plain Croſs upon the Head of the Owl in the Lateran Obelisk, or the † Croſs erected upon a Pitcher diffuſing ſtreams of Water into two Baſins, with ſprinkling branches in them, and all deſcribed upon a two-footed Altar, as in the Hieroglyphicks of the braſen Table of *Bembus*; will hardly decline all thought of Chriſtian ſignality in them.

* Wherein the lower part is ſomewhat longer, as defined by *upton de ſtudio militari*, and *Johannes de Bado Aureo, cum comment. clariſſ. & doctiſſ. Biſſæi.*

† *Caſal. de Ritibus. Boſio nella Trionfante croce.*

We ſhall not call in the Hebrew *Tenapha*, or ceremony of their Oblations, waved by the Prieſt unto the four quarters of the World, after the form of a Croſs; as in the Peace offerings. And if it were clearly made out what is remarkably delivered from the Traditions of the Rabbins, that as the Oyl was poured coronally or circularly upon the Head of Kings, ſo the High-Prieſt was anointed decuſſatively or in the form of an X; though it could not eſcape a typical thought of Chriſt, from myſtical conſiderators; yet being the conceit is Hebrew, we ſhould rather expect its verification from Analogy in that Language, than to confine the ſame unto the unconcerned Letters of *Greece*, or make it out by the characters of *Cadmus* or *Palamedes*.

Of this Quincuncial Ordination the Ancients practiſed much, diſcourſed little; and the Moderns have nothing enlarged; which he that more nearly conſidereth, in the form of its ſquare *Rhombus*, and decuſſation, with the ſeveral commodities, myſteries, paralleliſms, and reſemblances, both in Art and Nature, ſhall eaſily diſcern the elegancy of this Order.

That this was in ſome ways of practice in diverſe and diſtant Nations, hints or deliveries there are from no ſlender Antiquity. In the hanging Gardens of *Babylon*, from *Abydenus*, *Euſebius*, and others, * *Curtius* deſcribeth this Rule of decuſſation. In the memorable Garden of *Alcinous*, anciently conceived an original phancy from Paradiſe, mention there is of well contrived order; For ſo hath *Didymus* and *Euſtachius* expounded the emphatical

* *Decuſſatio ipſa jucundum ac perjucundum conſpectum præbuit.* Curt. *Hortar.* l. 6.

phatical word. *Diomedes* describing the Rural Possessions of his Father, gives account in the same Language of Trees orderly planted. And *Ulysses* being a Boy was promised by his Father forty Figg-trees, and fifty * Rows of Vines producing all kind of Grapes.

That the Eastern Inhabitants of *India* made use of such order, even in open Plantations, is deducible from *Theophrastus*; who describing the Trees whereof they made their Garments, plainly delivereth that they were planted κατ' ὄρχους, and in such order that at a distance, men would mistake them for Vineyards. The same seems confirmed in *Greece* from a singular expression in † *Aristotle* concerning the order of Vines, delivered by a military term representing the orders of Souldiers, which also confirmeth the antiquity of this form yet used in Vineal Plantations.

That the same was used in Latine Plantations is plainly confirmed from the commending Pen of *Varro*, *Quintilian*, and handsom Description of * *Virgil*.

That the first Plantations not long after the Floud were disposed after this manner, the generality and antiquity of this order observed in Vineyards, and Wine Plantations, affordeth some conjecture. And since from judicious enquiry, *Saturn* who divided the World between his three Sons, who beareth a Sickle in his hand, who taught the Plantations of Vines, the setting, grafting of Trees, and the best part of Agriculture, is discovered to be *Noah*; whether this early dispersed Husbandry in Vineyards, had not its Original in that Patriarch, is no such Paralogical doubt.

And if it were clear that this was used by *Noah* after the Floud, I could easily believe it was in use before it; Not willing to fix to such ancient Inventions no higher Original than *Noah*; Nor readily conceiving those aged *Heroes*, whose Diet was Vegetable, and only, or chiefly consisted in the fruits of the Earth, were much deficient in their splendid Cultivations; or after the experience of fifteen hundred years, left much for future discovery in Botanical Agriculture: Nor fully perswaded that Wine was the Invention of *Noah*, that fermented Liquors, which often make themselves, so long escaped their Luxury or Experience; that the first Sin of the new World was no Sin of the old: That *Cain* and *Abel* were the first that offered Sacrifice; or because the Scripture is silent, that *Adam* or *Isaac* offered none at all.

Whether *Abraham* brought up in the first planting Country, observed not some Rule hereof, when he planted a Grove at *Beer-sheba*; or whether at least a like Ordination were not in the Garden of *Solomon*, probability may contest; Answerably unto the wisdom of that eminent Botanologer, and orderly disposer of all his other Works. Especially since this was one piece of Gallantry, wherein he pursued the specious part of felicity, according to his own Description: *I made me Gardens and Orchards, and planted Trees in them of all kinds of Fruit. I made me Pools of Water, to water therewith the Wood that bringeth forth Trees.* Which was no ordinary Plantation, if according to the *Targum*, or *Chaldee Paraphrase*, it contained all kinds of Plants, and some fetched as far as *India*; And the extent thereof were from the wall of *Jerusalem* unto the water of *Siloah*.

And if *Jordan* were but *Jaar Eden*, that is, the River of *Eden*; *Genesar* but *Gansar* or the Prince of Gardens; and it could be made out, that the Plain of *Jordan* were watered not comparatively, but causally; and because it was the Paradise of God, as the Learned * *Abramus* hinteth: he was not far from the Prototype and Original of Plantations. And since even in Paradise it self, the Tree of Knowledge was placed in the middle of the Garden, whatever was the ambient figure, there wanted not a centre and rule of decussation. Whether the Groves and sacred Plantations of Antiquity, were not thus orderly placed, either by *quaternio's*, or quintuple ordinations, may favourably be doubted. For since they were so methodical in the constitutions of their Temples, as to observe the due situation, aspect, manner, form, and order in Architectonical Relations, whether they were not as distinct in their Groves and Plantations about them, in form and *species* respectively

* ὄρχοι, σίχοι ἀμπέλων, φυτῶν σίχος, ἢ καλὰ τάξιν φυλεία. Phavorinus. Philoxenus.

† συμμάχους ἀμπέλων. Polit. 7.

* *Indulget ordinibus, nec secius omnis in unguem Arboribus positis, stato via limite quadret.* Georg. 2.

Eccles. 2.

* *Vet. Testamenti Pharus.*

spectively unto their Deities, is not without probability of conjecture. And in their Groves of the Sun this was a fit number by multiplication to denote the days of the year; and might Hieroglyphically speak as much, as the mystical *Statua* of * *Janus* in the Language of his Fingers. And since they were so critical in the number of his Horses, the strings of his Harp, and Rays about his Head, denoting the Orbs of Heaven, the Seasons and Months of the Year; witty Idolatry would hardly be flat in other Appropriations.

* Which King *Numa* set up, with his fingers so disposed that they numerically denoted 365. *Pliny.*

CHAP. II.

NOr was this only a form of practice in Plantations, but found imitation from high Antiquity, in sundry artificial contrivances and manual operations. For to omit the position of squared stones, *cuneatim* or *wedgewise* in the Walls of *Roman* and *Gothick* buildings; and the *lithostrata* or figured Pavements of the Ancients, which consisted not all of square stones, but were divided into triquetrous segments, honey-combs, and sexangular figures, according to *Vitruvius*; The squared stones and bricks in ancient Fabricks, were placed after this order. And two above or below conjoyned by a middle stone or *Plinthus*, observable in the ruines of *Forum Nervæ*, the *Mausoleum* of *Augustus*, the Pyramid of *Cestius*, and the sculpture draughts of the larger Pyramids of *Ægypt.* And therefore in the draughts of eminent Fabricks, Painters do commonly imitate this order in the Lines of their Description.

In the Laureat draughts of Sculpture and Picture, the leaves and foliate works are commonly thus contrived, which is but in imitation of the *Pulvinaria*, and ancient Pillow-work, observable in *Ionick* pieces, about Columns, Temples and Altars. To omit many other Analogies in Architectonical draughts; which Art it self is founded upon (*a*) Fives, as having its subject, and most graceful pieces divided by this number.

The Triumphal, Oval, and Civical Crowns of Laurel, Oak, and Myrtle, when fully made, were pleated after this order. And to omit the crossed Crowns of Christian Princes; what figure that was which *Anastasius* described upon the Head of *Leo* the third; or who first brought in the Arched Crown; That of *Charles* the Great, (which seems the first remarkably closed Crown,) was framed after this (*b*) manner; with an intersection in the middle from the main crossing barrs, and the interspaces, unto the frontal circle, continued by handsome Network-plates; much after this order. Whereon we shall not insist, because from greater Antiquity, and practice of Consecration, we meet with the radiated, and starry Crown, upon the Head of *Augustus*, and many succeeding Emperors. Since the *Armenians* and *Parthians* had a peculiar Royal Cap; And the *Grecians* from *Alexander* another kind of Diadem. And even Diadems themselve; were but Fasciations, and handsome Ligatures, about the Heads of Princes; nor wholly omitted in the Mitral Crown, which common Picture seems to set too upright and forward upon the Head of *Aaron*: * Worn sometimes singly, or doubly by Princes, according to their Kingdoms; and no more to be expected from two Crowns at once, upon the Head of *Ptolomy*. And so easily made out when Historians tell us, some bound up wounds, some hanged themselves with Diadems.

The Beds of the Ancients were corded somewhat after this fashion: That is, not directly, as ours at present, but obliquely, from side to side, and after the manner of Net-work; whereby they strengthened the *spondæ* or Bedsides, and spent less Cord in the Work: as is demonstrated by (*c*) *Blancanus.*

And as they lay in crossed Beds; so they sat upon seeming cross-legg'd seats; in which form the noblest thereof were framed: Observable in the Triumphal Seats, the *sella curulis*, or *Ædile Chairs*; in the Coyns of *Cestius*, *Sylla*, and *Julius*. That they sat also cross-legg'd, many nobler draughts declare;

(*a*) Of a structure five parts, *Fundamentum, parietes, Aperturæ, Compartitio, tectum.* Leo Alberti. Five Columns, *Tuscan, Dorick, Ionick, Corinthian, Compound.* Five different intercolumniations, *Pycnostylos, distylos, Systylos, Acostylos, Eustylos.* Vitruv.

(*b*) *uti constat ex pergamena apud* Chifflet. *in* B. R. *Bruxelli, & Icon. f. Stradæ.*

* Macc. 1. 11. *De armis scaccatis, masculatis, invectis, fasciatis, vide* Spelm. *Aspilog & Upton. cum eruditiss. Bissæo*

(*c*) Aristot. *Mechan. Quæst.*

clare; and in this figure the ſitting gods and goddeſſes are drawn in Medals and Medallions. And beſide this kind of work in Retiarie and hanging Textures, in Embroideries, and eminent Needle-works; the like is obvious unto every eye in Glaſs-windows. Nor only in Glaſſie contrivances, but alſo in Lattice and Stone-work, conceived in the Temple of *Solomon*; wherein the Windows are termed *feneſtræ reticulatæ*, or Lights framed like Nets. And agreeable unto the Greek expreſſion concerning Chriſt in the * *Canticles*, looking through the Nets, which ours hath rendred, *He looketh forth at the Windows, ſhewing himſelf through the Lattice*; that is, partly ſeen and unſeen, according to the viſible and inviſible ſide of his nature. To omit the noble reticulate work, in the Chapters of the Pillars of *Solomon*, with Lilies and Pomegranats upon a Net-work ground; and the *Craticula* or Grate through which the aſhes fell in the altar of burnt-offerings.

δικτυωτά.

* Cant. 2.

That the Net-works and Nets of Antiquity were little different in the form from ours at preſent, is confirmable from the Nets in the hands of the Retiarie gladiators, the proper Combatants with the Secutores. To omit the ancient *Conopeion* or gnat-net, of the Ægyptians, the inventors of that Artifice; the ruſhy labyrinths of *Theocritus*; the noſegay-nets, which hung from the head under the noſtrils of Princes; and that uneaſie metaphor of *Reticulum jecoris*, which ſome expound the Lobe, we the Caul above the Liver. As for that famous Net-work of *Vulcan*, which incloſed *Mars* and *Venus*, and cauſed that * unextinguiſhable laugh in Heaven; ſince the gods themſelves could not diſcern it, we ſhall not prie into it: Although why *Vulcan* bound them, *Neptune* looſed them, and *Apollo* ſhould firſt diſcover them, might afford no vulgar Mythologie. Heralds have not omitted this order or imitation thereof, whiles they ſymbolically adorn their Scutcheons with Maſcles, Fuſils and Saltyres, and while they diſpoſed the figures of Ermins, and varied Coats in this Quincuncial method.

* Ἄσβεστος δ' ἀρ' ἐνῶρτο γέλως. *Hom.*

The ſame is not forgot by Lapidaries, while they cut their Gemms pyramidally, or by æquicrural triangles. Perſpective Pictures, in their Baſe, Horiſon, and lines of diſtances, cannot eſcape theſe Rhomboidal decuſſations. Sculptors in their ſtrongeſt ſhadows, after this order to draw their double Haches. And the very *Americans* do naturally fall upon it, in their neat and curious Textures, which is alſo obſerved in the elegant Artifices of *Europe*. But this is no Law unto the woof of the neat *Retiarie* Spider, which ſeems to weave without tranſverſion, and by the union of right lines to make out a continued ſurface, which is beyond the common Art of Textury, and may ſtill nettle *Minerva* the Goddeſs of that Myſtery. And he that ſhall hatch the little ſeeds, either found in ſmall webs, or white round Eggs, carried under the bellies of ſome Spiders, and behold how at their firſt production in boxes, they will preſently fill the ſame with their webbs, may obſerve the early, and untaught finger of Nature, and how they are natively provided with a ſtock ſufficient for ſuch Texture.

As in the contention between *Minerva* and *Arachne*.

The Rural charm againſt Dodder, Tetter, and ſtrangling Weeds, was contrived after this order, while they placed a chalked Tile at the four corners, and one in the middle of their fields: which though ridiculous in the intention, was rational in the contrivance, and a good way to diffuſe the Magick through all parts of the *Area*.

Somewhat after this manner they ordered the little ſtones in the old Game of *Pentalithiſmus*, or caſting up five ſtones to catch them on the back of their hand. And with ſome reſemblance hereof, the *Proci* or Prodigal Paramours diſpoſed their men, when they played at * *Penelope*. For being themſelves an hundred and eight, they ſet fifty four ſtones on either ſide, and one in the middle, which they called *Penelope*; which he that hit was Maſter of the Game.

* In *Euſtachius*.

In Cheſs-boards and Tables we yet find Pyramids and Squares, I wiſh we had their true and ancient deſcription, far different from ours, or the *Chet mat* of the *Perſians*, and might continue ſome elegant Remarkables, as being an Invention as high as *Hermes* the Secretary of *Oſyris*, figuring the whole World, the motion of the Planets, with Eclipſes of Sun and Moon.

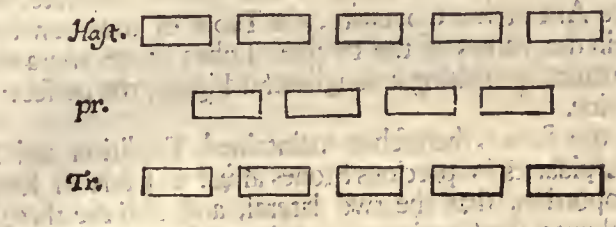
Plato.

Phyſicians

Physicians are not without the use of this decussation in several Operations, in ligatures and union of dissolved continuities. Mechanicks make use hereof in forcipal Organs, and Instruments of Incision; wherein who can but magnifie the power of decussation, inservient to contrary ends, solution and consolidation, union and division, illustrable from *Aristotle* in the old *Nucifragium* or Nutcracker, and the Instruments of Evulsion, Compression or incision; which consisting of two *Vectes* or Arms, converted towards each other, the innitency and stress being made upon the *hypomochlion* or fulciment in the decussation, the greater compression is made by the union of two impulsors.

The *Roman* * *Batalia* was ordered after this manner, whereof as sufficiently known *Virgil* hath left but an hint, and obscure intimation. For thus were the maniples and cohorts of the *Hastati*, *Principes* and *Triarii* placed in their Bodies, wherein consisted the strength of the *Roman* Battle. By this Ordination they readily fell into each other; the *Hastati* being pressed, handsomly retired into the Intervals of the *Principes*, these into that of the *Triarii*, which making as it were a new Body, might joyntly renew

* In the disposure of the Legions in the Wars of the Republick, before the division of the Legion into ten Cohorts by the Emperours. *Salmas.* in his Epistle *à Monsieur de Peyresc. & de Re militari Romanorum.*



the Battle, wherein consisted the secret of their successes. And therefore it was remarkably † singular in the Battle of *Africa*, that *Scipio* fearing a rout from the Elephants of the Enemy, left not the *Principes* in their alternate distances; whereby the Elephants passing the vacuities of the *Hastati*, might have run upon them, but drew his Battle into right order, and leaving the passages bare, defeated the mischief intended by the Elephants. Out of this figure were made two remarkable forms of Battle, the *Cuneus* and *Forceps*, or the shear and wedge Battles, each made of half a *Rhombus*, and but differenced by position. The wedge invented to break or work into a Body, the *Forceps* to environ and defeat the power thereof, composed out of the selectest Soldiery and disposed into the form of an V, wherein receiving the wedge, it inclosed it on both sides. After this form the famous * *Nasses* ordered his Battle against the *Franks*, and by this figure the *Almans* were inclosed, and cut in pieces.

† *Polybius. Appianus.*

* *Agathias. Ammianus.*

The *Rhombus* or Lozenge-figure so visible in this order, was also a remarkable form of Battle in the *Grecian* * Cavalry, observed by the *Thessalians*, and *Philip* King of *Macedon*, and frequently by the *Parthians*; as being most ready to turn every way, and best to be commanded, as having its Ductors, or Commanders at each Angle.

* *Ælian. Tact.*

The *Macedonian Phalanx* (a long time thought invincible) consisted of a long square. For though they might be sixteen in Rank and File, yet when they shut close, so that the sixth Pike advanced before the first, though the number might be square, the figure was oblong, answerable unto the Quincuncial quadrate of *Curtius*. According to this square, *Thucydides* delivers, the *Athenians* disposed their Battle against the *Lacedemonians* † brickwise, and by the same word the learned *Gellius* expoundeth the quadrate of * *Virgil*, after the form of a Brick or Tile.

† *ἐν πλινθίῳ.*

* *Sectoque via limite quadret* Comment. *in Virgil.*

And as the first station and position of Trees, so was the first habitation of Men, not in round Cities, as of later foundation; For the form of *Babylon* the first City was square, and so shall also be the last, according to the description of the Holy City in the *Apocalypse*. The famous Pillars of *Seth* before the Flood, had also the like foundation, if they were but *Antediluvian* Obelisks, and such as *Cham* and his *Ægyptian* race imitated after the Flood.

But

But *Nineveh*, which Authors acknowledge to have exceeded *Babylon*, was of a † longilateral figure, ninety five Furlongs broad, and an hundred and fifty long, and ſo making about ſixty miles in circuit, which is is the meaſure of three days journey, according unto Military Marches, or Caſtrenſial Manſions. So that if *Jonas* entred at the narrower ſide, he found enough for one days walk to attain the heart of the City, to make his Proclamation. And if we imagine a City extending from *Ware* to *London*, the expreſſion will be moderate of ſixſcore thouſand Infants, although we allow vacuities, fields and intervals of habitation, as there needs muſt be when the Monument of *Ninus* took up no leſs than ten Furlongs.

† *Diod. Sic.*

And, though none of the ſeven wonders, yet a noble piece of Antiquity, and made by a Copy exceeding all the reſt, had its principal parts diſpoſed after this manner, that is, the Labyrinth of *Crete*, built upon a long quadrate, containing five large ſquares; communicating by right inflections, terminating in the centre of the middle ſquare, and lodging of the *Minotaur*, if we conform unto the deſcription of the elegant Medal thereof in * *Agoſtino*. And though in many accounts we reckon groſly by the ſquare, yet is that very often to be accepted as a long-ſided quadrate, which was the figure of the Ark of the Covenant, the Table of the Shew-bread, and the Stone wherein the names of the twelve Tribes were engraved, that is, three in a row, naturally making a longilateral Figure, the perfect quadrate being made by nine.

* *Antonio Agoſtino delle medaglie.*

What figure the Stones themſelves maintained, Tradition and Scripture are ſilent, yet Lapidaries in precious Stones affect a Table or long ſquare, and in ſuch proportion, that the two lateral, and alſo the three inferiour Tables are equal unto the ſuperiour; and the angles of the lateral Tables contain and conſtitute the *hypothenuſe*, or broader ſides ſubtending.

That the Tables of the Law were of this figure, general imitation and tradition hath confirmed; yet are we unwilling to load the ſhoulders of *Moſes* with ſuch maſſy Stones, as ſome Pictures lay upon them, ſince 'tis plainly delivered that he came down with them in his hand; ſince the word ſtrictly taken implies no ſuch maſſy hewing, but cutting, and faſhioning of them into ſhape and ſurface; ſince ſome will have them Emeralds, and if they were made of the Materials of Mount *Sinai*, not improbable that they were Marble: Since the Words were not many, the Letters ſhort of five hundred, and the Tables written on both ſides required no ſuch capacity.

The Beds of the Ancients were different from ours at preſent, which are almoſt ſquare, being framed oblong, and about a double unto their breadth; not much unlike the *Area*, or Bed of this Quincuncial quadrate. The ſingle Beds of *Greece* were * ſix Foot and a little more in length, three in breadth; the Giant-like-bed of *Og*, which had four cubits of breadth, nine and a half in length, varied not much from this proportion. The Funeral-bed of King *Cheops*, in the greater Pyramid, which holds ſeven in length, and four Foot in breadth, had no great diſformity from this meaſure; And whatſoever were the breadth, the length could hardly be leſs, of the tyrannical bed of *Procruſtes*, ſince in a ſhorter meaſure he had not been fitted with Perſons for his cruelty of extenſion. But the old Sepulchral-bed, or *Amazonian* † Tomb in the Market-place of *Megara*, was in the form of a Lozenge; readily made out by the compoſure of the Body. For the arms not lying faſciated or wrapt up after the *Grecian* manner, but in a middle diſtention, the including lines will ſtrictly make out that figure.

* Ariſtot. *Mechan.*

† Plut. *in vit. Theſ.*

CHAP.

CHAP. III.

NOW although this elegant ordination of Vegetables, hath found coincidence or imitation in ſundry works of Art, yet is it not alſo deſtitute of natural examples; and though overlooked by all, was elegantly obſervable, in ſeveral works of nature.

Could we ſatisfie our ſelves in the poſition of the lights above, or diſcover the wiſdom of that order ſo invariably maintained in the fixed Stars of Heaven; Could we have any light, why the ſtellary part of the firſt Maſs ſeparated into this order, that the Girdle of *Orion* ſhould ever maintain its line, and the two Stars in *Charles*'s Wain never leave pointing at the Pole-Star; we might abate the *Pythagorical* Muſick of the Spheres, the ſeven-fold Pipe of *Pan*, and the ſtrange Cryptography of *Gaffarel* in his Starry Book of Heaven.

But not to look ſo high as Heaven or the ſingle Quincunx of the *Hyades* upon the neck of *Taurus*, the Triangle, and remarkable *Cruſero* about the foot of the *Centuar*; obſervable rudiments there are hereof in ſubterraneous concretions, and bodies in the Earth; in the *Gypſum* or *Taleum Rhomboides*, in the *Favaginites* or Hony-comb-ſtone, in the *Aſteria* and *Aſtroites*, and in the Crucigerous-ſtone of S. *Jago* of *Gallicia*.

The ſame is obſervably effected in the *Iülus*, Catkins, or pendulous excreſcencies of ſeveral Trees, of Wall-nuts, Alders, and Hazels, which hanging all the Winter, and maintaining their Net-work cloſe, by the expanſion thereof are the early foretellers of the Spring: diſcoverable alſo in long Pepper, and elegantly in the *Iülus* of *Calamus Aromaticus*, ſo plentifully growing with us in the firſt Palms of Willows, and in the Flowers of Sycamore, *Petaſites*, *Aſphodelus*, and *Blattaria*, before explication. After ſuch order ſtand the flowery Branches in our beſt ſpread *Verbaſcum*, and the ſeeds about the ſpicous Head or torch of *Tapſus Barbatus*, in as fair a regularity as the circular and wreathed order will admit, which advanceth one ſide of the ſquare, and makes the ſame Rhomboidal.

In the ſquamous heads of *Scabious*, *Knapweed*, and the elegant *Jacea Pinea*, and in the Scaly compoſure of the *Oak-Roſe*, which ſome years moſt aboundeth. After this order hath Nature planted the Leaves in the Head of the common and prickled Artichoak; wherein the black and ſhining Flies do ſhelter themſelves, when they retire from the purple Flower about it. The ſame is alſo found in the pricks, ſockets, and impreſſions of the ſeeds, in the pulp or bottom thereof; wherein do elegantly ſtick the Fathers of their Mother *. To omit the Quincuncial Specks on the top of the Miſcle-berry, eſpecially that which grows upon the *Tilia* or Lime-Tree. And the remarkable diſpoſure of thoſe yellow Fringes about the purple Peſtil of *Aaron*, and elegant cluſters of Dragons, ſo peculiarly ſecured by nature, with an *Umbrella* or skreening Leaf about them.

The ſpongy Leaves of ſome Sea-wracks, *Fucus*, Oaks, in their ſeveral kinds, found about the Shoar, with ejectments of the Sea, are over-wrought with Net-work elegantly containing this order: which plainly declareth the naturality of this texture; and how the Needle of nature delighteth to work, even in low and doubtful vegetations.

The *Arbuſtetum* or Thicket on the head of the Teazel, may be obſerved in this order: And he that conſidereth that Fabrick ſo regularly paliſadoed, and ſtemm'd with Flowers of the Royal colour; in the Houſe of the ſolitary maggot, may find the Seraglio of *Solomon*. And contemplating the calicular ſhafts, and uncous diſpoſure of their extremities, ſo accommodable unto the office of abſterſion, not condemn as wholly improbable the conceit of thoſe who accept it for the Herb * *Borith*. Where by the way, we could with much inquiry never diſcover any transfiguration in this abſte-

Capitula ſquammata Quercuum Bauhini, where of though he ſaith *perraro reperiuntur, his tantùm invenimus*; yet we find them commonly with us and in great numbers.

* *Antho. Græc. inter Epigrammata* χειρὸς ἐνδὸν ἐμῶν, μητρὸς λαγόνων ἔχω πατέρα.

Eſpecially the *porus cervinus*, *Imperati*, *Sporoſa*, or Alga *παπύλεως Bauhini*.

* Jer. 2. 22.

mious Inſect, although we have kept them long in their proper Houſes, and Boxes. Where ſome wrapt up in their Webbs, have lived upon their own Bowels, from *September* unto *July*.

In ſuch a Grove do walk the little Creepers about the head of the Burr. And ſuch an order is obſerved in the aculeous prickly plantation upon the heads of ſeveral common Thiſtles, remarkably in the notable paliſadoes about the Flower of the milk-Thiſtle; and he that inquireth into the little bottom of the globe-Thiſtle, may find that gallant Buſh ariſe from a ſcalp of like diſpoſure.

The white *Umbrella* or medical buſh of Elder, is an Epitome of this order: ariſing from five main ſtemms Quincuncially diſpoſed, and tolerably maintained in their ſubdiviſions. To omit the lower obſervations in the ſeminal ſpike of Mercury wild, and Plantane.

Thus hath Nature ranged the flowers of Santfoyn, and *French* Hony-ſuckle; and ſome what after this manner hath ordered the buſh in *Jupiter*'s beard, or Houſeleek; which old ſuperſtition ſet on the tops of Houſes, as a defenſative againſt Lightning and Thunder. The like in Fenny Seagreen or the water* Souldier; which, though a Military name from *Greece*, makes out the *Roman* order.

* *Stratiotes.*

A like ordination there is in the favaginous Sockets, and Lozenge ſeeds of the noble flower of the Sun. Wherein in Lozenge-figured boxes nature ſhuts up the Seeds, and Balſam which is about them.

But the Firr and Pine-tree, from their fruits do naturally dictate this poſition; The Rhomboidal protuberances in Pine-apples maintaining this Quincuncial order unto each other, and each *Rhombus* in it ſelf. Thus are alſo diſpoſed the triangular foliations in the conical fruit of the Firr-tree, orderly ſhadowing and protecting the winged ſeeds below them.

The like ſo often occurreth to the curioſity of obſervers, eſpecially in ſpicated Seeds and Flowers, that we ſhall not need to take in the ſingle Quincunx of *Fuchſius* in the growth of the maſle Fearn, the ſeedy diſpoſure of *Gramen Iſchemon*, and the trunk or neat Reticulate-work in the cod of the Sachel-palm.

For even in very many round-ſtalked Plants, the Leaves are ſet after a Quintuple ordination, the firſt Leaf anſwering the fifth in lateral diſpoſition. Wherein the Leaves ſucceſſively rounding the Stalk, in four at the furtheſt the compaſs is abſolved, and the fifth Leaf or Sprout returns to the poſition of the other fifth before it; as in accounting upward is often obſervable in Furr, Pellitory, Ragweed, the ſprouts of Oaks, and Thorns upon Pollards, and very remarkably in the regular diſpoſure of the rugged excreſcencies in the yearly ſhoots of the Pine.

But in ſquare-ſtalked Plants, the Leaves ſtand reſpectively unto each other, either in croſs or decuſſation to thoſe above or below them, ariſing at croſs poſitions; whereby they ſhadow not each other, and better reſiſt the force of winds, which in a parallel ſituation, and upon ſquare Stalks would more forcibly bear upon them.

And to omit, how Leaves and Sprouts which compaſs not the Stalk, are often ſet in a *Rhomboides*, and making long and ſhort Diagonals, do ſtand like the leggs of Quadrupeds when they go: Nor to urge the thwart encloſure and fardling of flowers and bloſſoms before explication, as in the multiplied leaves of Piony; And the *Chiaſmus* in five-leaved flowers, while one lies wrapt about the ſtaminous beards, the other four obliquely ſhutting and cloſing upon each other; and how even flowers which conſiſt of four leaves, ſtand not ordinarily in three and one, but two, and two croſwiſe, unto the *Stylus*; even the Autumnal buds, which await the return of the Sun, do after the Winter-ſolſtice multiply their calicular leaves, making little *Rhombus*'s, and Net-work figures, as in the Sycamore and Lilack.

The like is diſcoverable in the original production of Plants, which firſt putting forth two leaves, thoſe which ſucceed, bear not over each other, but ſhoot obliquely or croſwiſe, untill the ſtalk appeareth; which ſendeth not forth its firſt leaves without all order unto them: and he that from

hence

hence can discover in what position the two first leaves did arise, is no ordinary observator.

Where, by the way, he that observeth the rudimental spring of seeds, shall find strict rule, although not after this order. How little is required unto effectual generation, and in what diminutives the plastick principle lodgeth, is exemplified in seeds, wherein the greater mass affords so little comproduction. In Beans the leaf and root sprout from the *Germen*, the main sides split, and lie by; and in some pull'd up near the time of blooming, we have found the pulpous sides intire or little wasted. In Acorns the nebb dilating splitteth the two sides, which sometimes lie whole, when the Oak is sprouted two handfuls. In Lupins these pulpy sides do sometimes arise with the stalk in a resemblance of two fat leaves. Wheat and Rye will grow up, if after they have shot some tender Roots, the adhering pulp be taken from them. Beans will prosper though a part be cut away, and so much set as sufficeth to contain and keep the *Germen* close. From this superfluous pulp in unkindly, and wet years, may arise that multiplicity of little Insects, which infest the Roots and Sprouts of tender Grains and Pulses.

In the little neb or fructifying principle, the motion is regular, and not transvertible, as to make that ever the leaf, which nature intendeth the root; observable from their conversion, until they attain their right position, if Seeds be set inversedly.

In vain we expect the production of Plants from different parts of the Seed, from the same *corculum* or little original proceed both germinations; and in the power of this slender Particle lie many Roots, that though the same be pull'd away, the generative Particle will renew them again, and proceed to a perfect Plant; And Malt may be observed to grow, though the Cummes be fallen from it.

The seminal nebb hath a defined and single place, and not extended unto both extremes. And therefore many too vulgarly conceive that Barley and Oats grow at both ends; For they arise from one *punctilio* or generative nebb, and the Spear sliding under the husk, first appeareth nigh the top. But in Wheat and Rye being bare, the sprouts are seen together: If Barley unhulled would grow, both would appear at once. But in this and Oat-meal the nebb is broken away, which makes them the milder Food and less apt to raise fermentation in Decoctions.

Men taking notice of what is outwardly visible, conceive a sensible priority in the Root. But as they begin from one part, so they seem to start and set out upon one signal of nature. In Beans yet soft, in Pease while they adhere unto the Cod, the rudimental Leaf and Root are discoverable: In the Seeds of Rocket and Mustard, sprouting in Glasses of Water, when the one is manifest, the other is also perceptible. In muddy Waters apt to breed Duckweed, and Periwinkles, if the first and rudimental stroaks of Duckweed be observed, the Leaves and Root anticipate not each other. But in the Date-stone the first sprout is neither root nor leaf distinctly, but both together; For the Germination being to pass through the narrow Navel and hole about the midst of the stone, the generative germ is fain to enlengthen it self, and shooting out about an inch, at that distance divideth into the ascending and descending portion.

And though it be generally thought, that Seeds will root at that end, where they adhere to their Originals, and observable it is that the nebb sets most often next the stalk, as in Grains, Pulses, and most small Seeds; yet is it hardly made out in many greater Plants. For in Acorns, Almonds, Pistachios, Wall-nuts, and acuminated Shells, the germ puts forth at the remotest part of the pulp. And therefore to set Seeds in that posture, wherein the Leaf and Roots may shoot right without contortion, or forced circumvolution, which might render them strongly rooted, and straighter, were a Criticism in Agriculture. And Nature seems to have made some provision hereof in many from their figure, that as they fall from the Tree they may lie in Positions agreeable to such advantages.

Beſide the open and viſible Teſticles of Plants, the ſeminal Pores lie in great part inviſible, while the Sun finds Polypody in Stone-walls, the little ſtinging Nettle and Nightſhade in barren ſandy High-ways, *Scurvy-Graſs* in *Greenland*, and unknown Plants in Earth brought from remote Countries. Beſide the known longevity of ſome Trees, what is the moſt laſting Herb, or Seed, ſeems not eaſily determinable. Mandrakes upon known account have lived near an hundred years. Seeds found in Wild-Fowls Gizards have ſprouted in the Earth. The Seeds of Marjoran and *Stramonium* carelesly kept, have grown after ſeven years. Even in Garden-plots long fallow, and digged up, the Seeds of *Blattaria* and yellow Henbane, after twelve years burial have produced themſelves again.

That Bodies are firſt Spirits, *Paracelſus* could affirm, which in the maturation of Seeds and Fruits, ſeem obſcurely implied by * *Ariſtotle*, when he delivereth, that the ſpirituous parts are converted into Water, and the Water into Earth; and atteſted by obſervation in the maturative progreſs of Seeds, wherein at firſt may be diſcerned a flatuous diſtenſion of the husk, afterwards a thin liquor, which longer time digeſteth into a pulp or kernel, obſervable in Almonds and large Nuts. And ſome way anſwered in the progreſſional perfection of animal ſemination, in its ſpermatical maturation from crude pubeſcency unto perfection. And even that Seeds themſelves in their rudimental diſcoveries, appear in foliaceous ſurcles, or ſprouts within their coverings, in a diaphanous gelly, before deeper incraſſation, is alſo viſibly verified in Cherries, Acorns, Plums.

* *In mir. cum Cabeo.*

From ſeminal conſiderations, either in reference unto one mother, or diſtinction from animal production, the Holy Scripture deſcribeth the vegetable Creation; And while it divideth Plants but into *Herb* and *Tree*, though it ſeemeth to make but an accidental diviſion, from magnitude, it tacitely containeth the natural diſtinction of vegetables, obſerved by Herbariſts, and comprehending the four kinds. For ſince the moſt natural diſtinction is made from the production of leaf or ſtalk, and Plants after the two firſt ſeminal leaves, do either proceed to ſend forth more leaves, or a ſtalk, and the folious and ſtalky emiſſion diſtinguiſheth Herbs and Trees, they ſtand Authentically differenced but from the accidents of the ſtalk.

The Æquivocal production of things under undiſcerned principles, makes a large part of generation, though they ſeem to hold a wide univocacy in their ſet and certain Originals, while almoſt every Plant breeds its peculiar Inſect, moſt a Butterfly, Moth or Fly, wherein the Oak ſeems to contain the largeſt ſeminality, while the *Iülus*, Oak-apple, Dill, wholly tuft, foraminous roundles upon the leaf, and Grapes under Ground make a Fly with ſome difference. The great variety of Flys lies in the variety of their Originals; in the Seeds of Caterpillars or Cankers there lieth not only a Butterfly or Moth, but if they be ſteril or untimely caſt, their production is often a Fly, which we have alſo obſerved from corrupted and mouldred Eggs, both of Hens and Fiſhes; To omit the generation of Bees out of the Bodies of dead Heifers, or what is ſtrange, yet well atteſted, the production of Eels in the backs of living Cods and Perches.

Schonveldus de Piſc.

The exiguity and ſmallneſs of ſome Seeds extending to large productions, is one of the magnalities of Nature, ſomewhat illuſtrating the work of the Creation, and vaſt production from nothing. The true † Seeds of Cypreſs and Rampions are indiſtinguiſhable by old Eyes. Of the Seeds of Tabaco a thouſand make not one grain. The diſputed Seeds of Hartstongue, and Maidenhair, require a greater number. From ſuch undiſcernable ſeminalities ariſe ſpontaneous productions. He that would diſcern the rudimental ſtroak of a Plant, may behold it in the Original of Duckweed, at the bigneſs of a Pins point, from convenient Water in Glaſſes, wherein a watchful Eye may alſo diſcover the puncticular Originals of Periwinkles and Gnats.

† *Doctiſſim. Lauremburg. Corr.*

That Seeds of ſome Plants are leſs than any Animals, ſeems of no clear deciſion; That the biggeſt of Vegetables exceedeth the biggeſt of Animals, in full bulk, and all dimenſions, admits exception in the Whale, which in length and above-ground-meaſure, will alſo contend with tall Oaks. That the

richeſt

richeſt odour of Plants, ſurpaſſeth that of Animals, may ſeem of ſome doubt; ſince Animal-musk ſeems to excel the Vegetable, and we find ſo noble a ſcent in the Tulip-Fly, and * Goat-Beetle.

* The long and tender green *Capricornus* rarely found, we could never meet with but two.

Now whether ſeminal Nebbs hold any ſure proportion unto ſeminal Encloſures, why the form of the Germ doth not anſwer the figure of the encloſing Pulp, why the Nebb is ſeated upon the ſolid, and not the channel'd ſide of the Seed as in Grains, why ſince we often meet with two Yolks in one ſhell, and ſometimes one Egg within another, we do not oftener meet with two Nebbs in one diſtinct Seed: why ſince the Eggs of a Hen laid at one courſe, do commonly out-weigh the Bird, and ſome Moths coming out of their caſes, without aſſiſtance of food, will lay ſo many Eggs as to out-weigh their bodies, Trees rarely bear their Fruit, in that gravity or proportion: Whether in the germination of ſeeds according to *Hippocrates*, the lighter part aſcendeth, and maketh the ſprout, the heavieſt tending downward frameth the Root; Since we obſerve that the firſt ſhoot of ſeeds in water, will ſink or bow down at the upper and leafing end: Whether it be not more rational Epicuriſm to contrive whole Diſhes out of the Nebbs and ſpirited particles of Plants, than from the Gallatures and Treddles of Eggs; ſince that part is found to hold no ſeminal ſhare in Oval Generation, are Queries which might enlarge, but muſt conclude this digreſſion.

And though not in this order, yet how Nature delighteth in this number, and what conſent and coordination there is in the leaves and parts of Flowers, it cannot eſcape our obſervation in no ſmall number of Plants. For the calicular or ſupporting and doſing leaves, do anſwer the number of the Flowers, eſpecially ſuch as exceed not the number of Swallows Eggs; as in Violets, Stitchwort, Bloſſoms, and Flowers of one Leaf have often five diviſions, anſwered by a like number of calicular leaves; as *Gentianella*, *Convolvulus*, Bell-flowers. In many the Flowers, Blades, or ſtaminous Shoots and Leaves are all equally Five, as in Cockle, Mullein, and *Blattaria*; Wherein the Flowers before explication are pentagonally wrapped up, with ſome reſemblance of the *Blatta* or Moth from whence it hath its Name: But the contrivance of Nature is ſingular in the opening and ſhutting of Bindweeds, performed by five inflexures, diſtinguiſhable by Pyramidal figures, and alſo different colours.

The Roſe at firſt is thought to have been of five leaves, as it yet groweth wild among us; but in the moſt luxuriant, the calicular leaves do ſtill maintain that number. But nothing is more admired than the five Brethren of the Roſe, and the ſtrange diſpoſure of the Appendices or Beards, in the calicular leaves thereof, which in deſpair of reſolution is tolerably ſalved from this contrivance, beſt ordered and ſuited for the free cloſure of them before explication. For thoſe two which are ſmooth, and of no Beard, are contrived to lye undermoſt, as without prominent parts, and fit to be ſmoothly covered; the other two which are beſet with Beards on either ſide, ſtand outward and uncovered, but the fifth or half-bearded leaf is covered on the bare ſide, but on the open ſide ſtands free, and bearded like the other.

Beſides, a large number of leaves have five diviſions, and may be circumſcribed by a *Pentagon* or figure of five Angles, made by right lines from the extremity of their leaves, as in Maple, Vine, Fig-tree: But five-leaved Flowers are commonly diſpoſed circularly about the *Stylus*; according to the higher Geometry of Nature, dividing a circle by five *radii*, which concurr not to make Diameters, as in Quadrilateral and Sexangular Interſections.

Now the number of Five is remarkable in every circle, not only as the firſt ſpherical number, but the meaſure of ſphærical motion. For ſpherical bodies move by fives, and every globular figure placed upon a plane, in direct volutation, returns to the firſt point of contaction in the firſt touch, accounting by the *Axes* of the Diamerers or Cardinal points of the four quarters thereof. And before it arriveth unto the ſame point again, it maketh

maketh five circles equal unto it ſelf, in each progreſs from thoſe quarters abſolving an equal circle.

By the ſame number doth Nature divide the circle of the Sea-Star, and in that order and number diſpoſeth thoſe elegant Semi circles, or dental Sockets and Eggs in the Sea Hedge-hogg. And no mean Obſervations hereof there is in the Mathematicks of the neateſt Retiary Spider, which concluding in forty four Circles, from five Semidiameters beginneth that elegant Texture.

And after this manner doth lay the foundation of the circular branches of the Oak, which being five-cornered, in the tender annual ſprouts, and manifeſting upon Inciſion the Signature of a Star, is after made circular, and ſwell'd into a round body: Which practice of Nature is become a point of Art, and makes two Problems in * *Euclide*. But the Bryar which ſends forth ſhoots and prickles from its angles, maintains its pentagonal figure, and the unobſerved Signature of a handſome Porch within it To omit the five ſmall Buttons dividing the Circle of the Ivy-berry, and the five Characters in the Winter ſtalk of the Walnut, with many other Obſervables, which cannot eſcape the eyes of ſignal diſcerners; Such as know where to find *Ajax* his Name in *Gallitricum*, or *Aaron*'s Mitre in Henbane.

* *Elem.* ll. 4.

Quincuncial forms and ordinations are alſo obſervable in animal figurations. For to omit the *hyoides* or throat-bone of Animals, the *furcula* or *merry-thought* in Birds, which ſupporteth the *ſcapulæ*, affording a paſſage for the wind-pipe and the gullet, the wings of Flyes, and diſpoſure of their leggs in their firſt formation from Maggots, and the poſition of their horns, wings and leggs, in their *Aurelian* caſes and ſwadling-clouts: The back of the *Cimex Arboreus*, found often upon Trees and leſſer Plants, doth elegantly diſcover the *Burgundian* decuſſation; And the like is obſervable in the belly of the *Notonecton*, or Water-Beetle, which ſwimmeth on its back, and the handſom *Rhombus's* of the Sea-Poult, or Werrel, on either ſide the Supine.

The ſexangular Cells in the Honey-combs of Bees are diſpoſed after this order; much there is not of wonder in the confuſed Houſes of Piſmires, though much in their buſie life and actions, more in the edificial Palaces of Bees and Monarchical ſpirits; who make their combs ſix corner'd, declining a circle, whereof many ſtand not cloſe together, and compleatly fill the *area* of the place; But rather affecting a ſix-ſided figure, whereby every cell affords a common ſide unto ſix more, and alſo a fit receptacle for the Bee it ſelf, which gathering into a Cylindrical Figure, aptly enters its ſexangular houſe, more nearly approaching a circular Figure, than either doth the Square or Triangle. And the Combs themſelves ſo regularly contrived, that their mutual interſections make three Lozenges at the bottom of every Cell; which ſeverally regarded make three Rows of neat Rhomboidal Figures, connected at the angles, and ſo continue three ſeveral chains throughout the whole Comb.

As for the *Favago* found commonly on the Sea-ſhoar, though named from an Honey-comb, it but rudely makes out the reſemblance, and better agrees with the round Cells of Humble Bees. He that would exactly diſcern the ſhop of a Bees mouth, need obſerving eyes, and good augmenting glaſſes; wherein is diſcoverable one of the neateſt pieces in nature; and he muſt have a more piercing eye than mine, who finds out the ſhape of Bulls-heads in the guts of Drones preſſed out behind, according to the experiment of *Gomeſius*; wherein notwithſtanding there ſeemeth ſomewhat which might incline a pliant fancy to credulity of ſimilitude.

Gom. de *Sale.*

A reſemblance hereof there is in the orderly and rarely diſpoſed Cells made by Flyes and Inſects, which we have often found faſtened about ſmall ſprigs; and in thoſe cottonary and woolly Pillows, which ſometimes we meet with faſtened unto Leaves, there is included an elegant Net-work Texture, out of which come many ſmall Flies. And ſome reſemblance there is of this order in the Eggs of ſome Butterflies and Moths, as they

ſtick

ſtick upon leaves, and other ſubſtances; which being dropped from behind, nor directed by the eye, doth neatly declare how Nature Geometrizeth, and obſerveth order in all things.

A like correſpondency in figure is found in the Skins and outward Teguments of Animals, whereof a regardable part are beautiful by this Texture. As the backs of ſeveral Snakes and Serpents, elegantly remarkable in the *Aſpis*, and the Dart-Snake, in the *Chiaſmus* and larger decuſſations upon the back of the Rattle-Snake, and in the cloſe and finer Texture of the *Mater formicarum*, or Snake that delights in Anthills; whereby upon approach of outward injuries, they can raiſe a thicker Phalanx on their backs, and handſomely contrive themſelves into all kinds of Flexures: Whereas their bellies are commonly covered with ſmooth ſemicircular diviſions, as beſt accommodable unto their quick and gliding motion.

This way is followed by Nature in the peculiar and remarkable tail of the Bever, wherein the ſcaly particles are diſpoſed ſomewhat after this order, which is the plaineſt reſolution of the wonder of *Bellonius*, while he ſaith with incredible Artifice hath Nature framed the Tail or Oar of the Bever: where by the way we cannot but wiſh a model of their Houſes, ſo much extolled by ſome Deſcribers: wherein ſince they are ſo bold as to venture upon three ſtages, we might examine their Artifice in the contignations, the Rule and Order in the compartitions; or whether that magnified Structure be any more than a rude rectangular Pyle or meer Hovel-building.

Thus works the Hand of Nature in the Feathery Plantation about Birds. Obſervable in the skins of the * Breaſt, Leggs and Pinions of Turkies, Geeſe, and Ducks, and the Oars or finny feet of Water-Fowl: And ſuch a natural Net is the ſcaly covering of Fiſhes, of Mullets, Carps, Tenches, *&c.* even in ſuch as are excoriable and conſiſt of ſmaller ſcales, as Bretts, Soals, and Flounders. The like Reticulate grain is obſervable in ſome *Ruſſia* Leather. To omit the ruder Figures of the *Oſtration*, the triangular or Cunny-fiſh, or the pricks of the Sea-Porcupine.

* Elegantly conſpicuous on the inſide of the ſtripped skins of Dive-Fowl, of the Cormorant, Goſhonder, Weaſel, Loon, *&c.*

The ſame is alſo obſervable in ſome part of the skin of Man, in Habits of neat Texture; and therefore not unaptly compared unto a Net: We ſhall not affirm that from ſuch grounds, the Ægyptian Embalmers imitated this Texture, yet in their Linnen-folds the ſame is ſtill obſervable among their neateſt Mummies, in the Figures of *Iſis* and *Oſyris*, and the Tutelary ſpirits in the Bembine Table. Nor is it to be over-looked how *Orus*, the Hieroglyphick of the World, is deſcribed in a Net-work Covering, from the Shoulder to the Foot. And (not to enlarge upon the cruciated Character of *Triſmegiſtus*, or handed croſſes, ſo often occurring in the Needles of *Pharaoh*, and Obelisks of Antiquity) the *Statuæ Iſiacæ*, and little Idols, found about the Mummies, do make a decuſſation or *Jacobs* Croſs, with their Arms, like that on the Head of *Ephraim* and *Manaſſes*, and this *decuſſis* is alſo graphically deſcribed between them.

This Reticulate or Net-work was alſo conſiderable in the inward parts of Man, not only from the firſt *ſubtegmen* or warp of his formation, but in the netty *fibres* of the Veins and Veſſels of Life; wherein according to common Anatomy the right and tranſverſe *fibres* are decuſſated by the oblique *fibres*; and ſo muſt frame a Reticulate and Quincuncial Figure by their Obliquations; Emphatically extending that elegant expreſſion of Scripture, *Thou haſt curiouſly embroidered me*, thou haſt wrought me up after the fineſt way of Texture, and as it were with a Needle.

Nor is the ſame obſervable only in ſome parts, but in the whole body of Man, which upon the extenſion of Arms and Leggs, doth make out a Square, whoſe interſection is at the Genitals. To omit the phantaſtical Quincunx in *Plato* of the firſt Hermaphrodite or double man, united at the Loyns, which *Jupiter* after divided.

A rudimental

A rudimental reſemblance hereof there is in the cruciated and rugged folds of the *Reticulum*, or Net-like Ventricle of ruminating horned Animals, which is the ſecond in order, and culinarily called the Honey-comb. For many diviſions there are in the ſtomach of ſeveral animals; what number they maintain in the *Scarus* and ruminating Fiſh, common deſcription, or our own experiment hath made no diſcovery. But in the Ventricle of *Porpuſes* there are three diviſions. In many Birds a Crop, Gizard, and little receptacle before it; but in Cornigerous animals, which chew the Cud, there are no leſs than four of diſtinct poſition and office.

The *Reticulum* by theſe croſſed cells, makes a further digeſtion, in the dry and exſuccous part of the Aliment received from the firſt Ventricle. For at the bottom of the Gullet there is a double Orifice; What is firſt received at the mouth deſcendeth into the firſt and greater ſtomach, from whence it is returned into the mouth again; and after a fuller maſtication, and ſalivous mixture, what part thereof deſcendeth again in a moiſt and ſucculent body, ſlides down the ſofter and more permeable Orifice, into the *Omaſus* or third ſtomach; and from thence conveyed into the fourth, receives its laſt digeſtion. The other dry and exſuccous part after rumination by the larger and ſtronger Orifice beareth into the firſt ſtomach, from thence into the *Reticulum*, and ſo progreſſively into the other diviſions. And therefore in Calves newly calved, there is little or no uſe of the two firſt Ventricles, for the milk and liquid Aliment ſlippeth down the ſofter Orifice, into the third ſtomach; where making little or no ſtay, it paſſeth into the fourth, the ſeat of the *Coagulum*, or Runnet, or that diviſion of ſtomach which ſeems to bear the name of the whole, in the Greek Tranſlation of the Prieſts Fee, in the Sacrifice of Peace-offerings.

As for thoſe Rhomboidal Figures made by the Cartilagineous parts of the Wezon, in the Lungs of great Fiſhes, and other animals, as *Rondeletius* diſcovered, we have not found them ſo to anſwer our figure as to be drawn into illuſtration; Something we expected in the more diſcernable texture of the Lungs of Frogs, which notwithſtanding being but two curious bladders not weighing above a grain, we found interwoven with veins, not obſerving any juſt order. More orderly ſituated are thoſe cretaceous and chalky concretions found ſometimes in the bigneſs of a ſmall Fetch on either ſide their Spine; which being not agreeable unto our order, nor yet obſerved by any, we ſhall not here diſcourſe on.

But had we found a better account and tolerable Anatomy, of that prominent Jowl of the * *Sperma Ceti* Whale, than queſtuary operation, or the ſtench of the laſt caſt upon our ſhoar, permitted, we might have perhaps diſcovered ſome handſome order in thoſe Net-like Seaſes and Sockets, made like Honey-combs, containing that medical matter.

* 1652. deſcribed in our *Pſeudo-epidem.* Edit. 3.

Laſtly, The inceſſion or local motion of animals is made with analogy unto this figure, by decuſſative diametrals, Quincuncial Lines and Angles. For to omit the enquiry how Butterflies and Breezes move their four Wings, how Birds and Fiſhes in Air and Water move by joynt ſtrokes of oppoſite Wings and Finns; and how ſalient animals in jumping forward ſeem to ariſe and fall upon a ſquare baſe; As the ſtation of moſt Quadrupeds is made upon a long ſquare, ſo in their motion they make a *Rhomboides*; their common progreſſion being performed Diametrally, by decuſſation and croſs advancement of their legs, which not obſerved, begot that remarkable abſurdity in the poſition of the legs of *Caſtor's* Horſe in the Capitol. The Snake which moveth circularly makes his ſpires in like order, the convex and concave ſpirals anſwering each other at alternate diſtances; In the motion of Man the Arms and Legs obſerve this thwarting poſition, but the Legs alone do move Quincuncially by ſingle angles with ſome reſemblance of an V meaſured by ſucceſſive advancement from each Foot, and the angle of indenture great or leſs, according to the extent or brevity of the ſtride.

Studious Obſervators may diſcover more analogies in the orderly book of nature, and cannot eſcape the Elegancy of her hand in other correſpondencies. The Figures of nails and crucifying appurtenances, are but precariouſly made

out

out in the *Granadilla* or Flower of Christ's Passion: And we despair to behold in these parts that handsom draught of crucifixion in the Fruit of the *Barbado*-Pine. The seminal Spike of *Phalaris*, or great shaking Grass, more nearly answers the tail of a Rattle-Snake, than many resemblances in *Porta*: And if the Man * *Orchis* of *Columna* be well made out, it excelleth all analogies. In young Wallnuts cut athwart, it is not hard to apprehend strange Characters; and in those of somewhat elder growth, handsome ornamental draughts about a plain cross. In the root of *Osmond* or Water-fern, every Eye may discern the form of a Half Moon, Rain-bow, or half the Character of *Pisces*. Some find *Hebrew*, *Arabick*, *Greek*, and *Latin* Characters in Plants; In a common one among us we seem to read *Acaia*, *Vivia*, *Lilil*.

* *Orchis Anthropophora*, *Fabii Columnæ*.

Right lines and circles make out the bulk of Plants; In the parts thereof we find Heliacal or spiral roundles, *Voluta's*, conical Sections, circular Pyramids, and frustums of *Archimedes*; And cannot overlook the orderly hand of Nature, in the alternate succession of the flat and narrower sides in the tender shoots of the Ash, or the regular inequality of bigness in the five-leaved flowers of Henbane, and something like in the calicular leaves of *Tutsan*. How the spots of *Persicaria* do manifest themselves between the sixth and tenth rib. How the triangular cap in the stem or *stylus* of Tuleps doth constantly point at three outward leaves. That spicated Flowers do open first at the stalk. That white Flowers have yellow thrums or knops. That the nebb of Beans and Pease do all look downward, and so press not upon each other; And how the Seeds of many pappous or downy Flowers lockt up in sockets after a *gomphosis* or *mortis*-articulation, diffuse themselves circularly into branches of rare order, observable in *Tragopogon* or Goats-beard, conformable to the Spiders web, and the *Radii* in like manner telarly inter-woven.

And how in animal Natures, even colours hold correspondencies, and mutual correlations. That the colour of the Caterpillar will shew again in the Butterfly, with some latitude is allowable. Though the regular spots in their wings seem but a mealy adhesion, and such as may be wiped away, yet since they come in this variety, out of their cases, there must be regular pores in those parts and membrances, defining such Exudations.

That † *Augustus* had native notes on his body and belly, after the order and number in the Star of *Charles wain*, will not seem strange unto astral Physiognomy, which accordingly considereth moles in the body of Man; or Physical Observators, who from the position of Moles in the Face, reduce them to rule and correspondency in other parts. Whether after the like method medical conjecture may not be raised upon parts inwardly affected; since parts about the lips are the critical seats of Pustules discharged in Agues; and scrophulous tumours about the neck do so often speak the like about the Mesentery, may also be considered.

† *Suet. in vit. Aug.*

The russet neck in young Lambs seems but adventitious, and may owe its tincture to some contaction in the Womb; But, that if sheep have any black or deep russet in their Faces, they want not the same about their Legs and Feet; That black hounds have mealy mouths and feet; That black Cows which have any white in their tails, should not miss of some in their bellies; and if all white in their bodies, yet if black-mouth'd, their ears and feet maintain the same colour, are correspondent tinctures not ordinarily failing in Nature, which easily unites the accidents of extremities, since in some generations she transmutes the parts themselves, while in the *Aurelian Metamorphosis* the head of the Canker becomes the Tail of the Butterfly. Which is in some way not beyond the contrivance of Art, in submersions and inlays, inverting the extremes of the Plant, and fetching the root from the top, and also imitated in handsom columnary work, in the inversion of the extremes; wherein the Capitel, and the Base, hold such near correspondency.

In the motive parts of Animals may be discovered mutual proportions; not only in those of Quadrupeds, but in the thigh-bone, leg, foot-bone, and claws of Birds. The legs of Spiders are made after a sesqui-tertian proportion,

and the long leggs of ſome Locuſts, double unto ſome others. But the internodial parts of Vegetables, or ſpaces between the joints, are contrived with more uncertainty; though the joints themſelves in many Plants, maintain a regular number.

In Vegetable Compoſure, the unition of prominent parts ſeems moſt to anſwer the *Apophyſes* or Proceſſes of Animal bones, whereof they are the produced parts or prominent explantations. And though in the parts of Plants which are not ordained for motion, we do not expect correſpondent Articulations; yet in the ſetting on of ſome flowers and ſeeds in their ſockets, and the lineal commiſſure of the pulp of ſeveral ſeeds, may be obſerved ſome ſhadow of the Harmony; ſome ſhow of the *Gomphoſis* or *mortis*-articulation.

As for the *Diarthroſis* or motive Articulation, there is expected little Analogy; though long-ſtalked leaves do move by long lines, and have obſervable motions, yet are they made by outward impulſion, like the motion of pendulous bodies, while the parts themſelves are united by ſome kind of *ſymphyſis* unto the ſtock.

But ſtanding Vegetables, void of motive-Articulations, are not without many motions. For beſide the motion of vegetation upward, and of radiation unto all quarters, that of contraction, dilatation, inclination, and contortion, is diſcoverable in many Plants. To omit the Roſe of *Jericho*, the Eat of Rye, which moves with change of weather, and the Magical Spit, made of no rare Plants, which winds before the fire, and roaſts the Bird without turning.

Even Animals near the Claſſis of Plants, ſeem to have the moſt reſtleſs motions. The Summer-worm of Ponds and Plaſhes, makes a long waving motion; the Hair-worm ſeldom lies ſtill. He that would behold a very anomalous motion, may obſerve it in the tortile and tiring ſtroaks of * Gnat-worms.

* Found often in ſome form of red maggot in the ſtanding waters of Ciſterns in the Summer.

CHAP. IV.

AS for the Delights, Commodities, Myſteries, with other concernments of this Order, we are unwilling to fly them over, in the ſhort deliveries of *Virgil*, *Varro*, or others, and ſhall therefore enlarge with additional ampliations.

By this poſition they had a juſt proportion of Earth, to ſupply an equality of nouriſhment. The diſtance being ordered, thick or thin, according to the magnitude or vigorous attraction of the Plant, the goodneſs, leanneſs or propriety of the Soyl: and therefore the rule of *Solon*, concerning the Territory of *Athens*, not extendible unto all; allowing the diſtance of ſix foot unto commom Trees, and nine for the Figg and Olive.

They had a due diffuſion of their Roots on all or both ſides; whereby they maintained ſome proportion to their height, in Trees of large radication. For that they ſtrictly make good their profundeur or depth unto their height, according to common conceit, and that expreſſion of * *Virgil*, though confirmable from the Plane Tree in *Pliny*, and ſome few examples, is not to be expected from the generation of Trees almoſt in any kind, either of ſide-ſpreading, or Tap-roots: Except we meaſure them by lateral and oppoſite diffuſions; nor commonly to be found in *minor* or Herby Plants; if we except Sea-holly, Liquoriſh, Sea-ruſh, and ſome others.

* *Quantum vertice ad auras Æthereas, tantum radice ad tartara tendit.*

They had a commodious radiation in their growth; and a due expanſion of their branches, for ſhadow or delight. For Trees thickly planted, do run up in height and branch with no expanſion, ſhooting unequally or ſhort, and thin upon the neighbouring ſide. And therefore Trees are inwardly bare, and ſpring, and leaf from the outward and Sunny ſide of their branches.

Whereby

Whereby they alſo avoided the peril of συνολεθρισμὸς or one Tree periſhing with another, as it happeneth oft-times from the ſick *effluviums* or entanglements of the Roots, falling foul with each other. Obſervable in Elms ſet in Hedges, where if one dieth the neighbouring Tree proſpereth not long after.

In this ſituation divided into many intervals and open unto ſix paſſages, they had the advantage of a fair perflation from winds; bruſhing and cleanſing their ſurfaces, relaxing and cloſing their pores unto due perſpiration. For that they afford large *effluviums* perceptible from odours, diffuſed at great diſtances, is obſervable from Onyons out of the Earth; which though dry, and kept until the ſpring, as they ſhoot forth large and many leaves, do notably abate of their weight. And Mint growing in glaſſes of water, untill it arriveth unto the weight of an ounce, in a ſhady place, will ſometimes exhauſt a pound of water.

And as they ſend forth much, ſo may they receive ſomewhat in: For beſide the common way and road of reception by the root, there may be a refection and imbibition from without; For gentle ſhowres refreſh Plants, though they enter not their roots; and the good and bad *effluviums* of Vegetables, promote or debilitate each other. So *Epithymum* and *Dodder*, rootleſs and out of the ground, maintain themſelves upon Thyme, Savory, and Plants whereon they hang. And *Ivy* divided from the root, we have obſerved to live ſome years, by the cirrous parts commonly conceived but as tenacles and holdfaſts unto it. The ſtalks of Mint cropt from the root ſtripped from the leaves, and ſet in *glaſſes* with the root end upward, and out of the water, we have obſerved to ſend forth ſprouts and leaves without the aid of roots, and *Scordium* to grow in like manner, the leaves ſet downward in water. To omit ſeveral Sea-plants, which grow on ſingle roots from ſtones, although in very many there are ſide-ſhoots and *fibres*, beſide the faſtening root.

By this open poſition they were fairly expoſed unto the Rays of Moon and Sun, ſo conſiderable in the growth of Vegetables. For though Poplars, Willows, and ſeveral Trees be made to grow about the brinks of *Acheron*, and dark habitations of the dead; Though ſome Plants are content to grow in obſcure Wells; Wherein alſo old Elm Pumps afford ſometimes long buſhy ſprouts, not obſervable in any above-ground: And large fields of Vegetables are able to maintain their verdure at the bottom and ſhady part of the Sea; yet the greateſt number are not content without the actual Rays of the Sun, but bend, incline, and follow them; As large liſts of ſoliſequious or Sun-following Plants. And ſome obſerve the method of its motion in their own growth and converſion, twining towards the Weſt by the South, as Bryony, Hops, Woodbine, and ſeveral kinds of Bindweed; which we ſhall more admire, when any can tell us, they obſerve another motion, and twiſt by the North at the *Antipodes*. The ſame Plants rooted againſt an erect North-wall full of holes, will find a way through them to look upon the Sun. And in tender Plants from Muſtard-ſeed, ſown in the Winter, and in a plot of Earth placed inwardly againſt a South-window, the tender ſtalks of two leaves aroſe not erect, but bending towards the window, nor looking much higher than the Meridian Sun. And if the Pot were turned they would work themſelves into their former declinations, making their converſion by the Eaſt. That the leaves of the Olive and ſome other Trees ſolſtitially turn, and preciſely tell us when the Sun is entred *Cancer*, is ſcarce expectable in any Climate; and *Theophraſtus* warily obſerves it; Yet ſomewhat thereof is obſervable in our own, in the leaves of Willows and Sallows, ſome weeks after the Soliſtice. But the great *Convolvulus* or white-flower'd *Bindweed* obſerves both motions of the Sun; while the Flower twiſts Æquinoctially from the left hand to the right, according to the daily revolution, the ſtalk twineth ecliptically from the right to the left, according to the annual converſion.

Some commend the expoſure of theſe orders unto the Weſtern gales, as the moſt generative and fructifying Breath of Heaven. But we applaud the

Husbandry of *Solomon*, whereto agreeth the doctrine of *Theophraſtus*. *Ariſe O Northwind, and blow thou South upon my Garden, that the Spices thereof may flow out*; For the North-wind cloſing the pores, and ſhutting up the *effluviums*, when the South doth after open and relax them, the Aromatical Gumms do drop, and ſweet odours fly actively from them. And if his Garden had the ſame ſituation, which Mapps, and Charts afford it, on the Eaſt-ſide of *Jeruſalem*, and having the Wall on the Weſt; theſe were the Winds unto which it was well expoſed.

By this way of Plantation they encreaſed the number of their Trees, which they loſt in *Quaternio's* and ſquare-orders, which is a commodity inſiſted on by *Varro*, and one great intent of Nature, in this poſition of Flowers and Seeds in the elegant formation of Plants, and the former Rules obſerved in natural and artificial Figurations.

Whether in this order, and one Tree in ſome meaſure breaking the cold and pinching guſts of winds from the other, Trees will not better maintain their inward circles, and either eſcape or moderate their excentricities, may alſo be conſidered. For the circles in Trees are naturally concentrical, parallel unto the bark, and unto each other, till froſt and piercing winds contract and cloſe them on the weather-ſide, the oppoſite ſemicircle widely enlarging, and at a comely diſtance, which hindreth oft-times the beauty and roundneſs of Trees, and makes the Timber leſs ſerviceable; whiles the aſcending juice not readily paſſing, ſettles in knots and inequalities. And therefore it is no new courſe of Agriculture, to obſerve the native poſition of Trees according to North and South in their tranſplantations.

The ſame is alſo obſervable under ground in the circinations and ſphærical rounds of Onyons, wherein the circles of the Orbs are oft-times larger, and the meridional lines ſtand wider upon one ſide than the other. And where the largeneſs will make up the number of planetical Orbs, that of *Luna*, and the lower Planets exceed the dimenſions of *Saturn*, and the higher: Whether the like be not verified in the Circles of the large roots of Briony and Mandrakes, or why in the knots of Deal or Firr the Circles are often eccentrical, although not in a plane, but vertical and right poſition, deſerves a further enquiry.

Whether there be not ſome irregularity of roundneſs in moſt Plants according to their poſition; Whether ſome ſmall compreſſion of pores be not perceptible in parts which ſtand againſt the current of Waters, as in Reeds, Bull-ruſhes, and other Vegetables toward the ſtreaming quarter, may alſo be obſerved: and therefore ſuch as are long and weak, are commonly contrived into a roundneſs of figure, whereby the water preſſeth leſs, and ſlippeth more ſmoothly from them, and even in flags of flat-figured leaves, the greater part obvert their ſharper ſides unto the current in ditches.

But whether Plants which float upon the ſurface of the water, be for the moſt part of cooling qualities, thoſe which ſhoot above it of heating vertues, and why? whether *Sargaſſo* for many miles floating upon the Weſtern Ocean, or Sea-lettuce, and *Phaſganium* at the bottom of our Seas, make good the like qualities? Why Fenny waters afford the hotteſt and ſweeteſt Plants, as *Calamus*, *Cyperus*, and Crowfoot, and mudd caſt out of ditches moſt naturally produceth Arſmart? Why Plants ſo greedy of water ſo little regard oyl? Why ſince many ſeeds contain much oyl within them, they endure it not well without, either in their growth or production? Why ſince Seeds ſhoot commonly under ground, and out of the Air, thoſe which are let fall in ſhallow glaſſes, upon the ſurface of the water, will ſooner ſprout than thoſe at the bottom? And if the water be covered with oyl, thoſe at the bottom will hardly ſprout at all, we have not room to conjecture.

Whether Ivy would not leſs offend the Trees in this clean ordination, and well kept paths, might perhaps deſerve the Queſtion. But this were a Quæry only unto ſome Habitations, and little concerning *Cyrus* or the Babylonian Territory; wherein by no induſtry *Harpalus* could make Ivy grow: And *Alexander* hardly found it about thoſe parts, to imitate the pomp

of

of *Bacchus*. And though in theſe Northern Regions we are too much acquainted with one Ivy, we know too little of another, whereby we apprehend not the expreſſions of Antiquity, the * Splenetick Medicine of *Galen*, and the Emphaſis of the Poet, in the † beauty of the white Ivy.

* *Galen. de med. ſecundum loc.*
† *Hederâ formoſior albâ.*

The like concerning the growth of Miſſeltoe, which dependeth not only of the *Species*, or kind of Tree, but much alſo of the Soil. And therefore common in ſome places, not readily found in others, frequent in *France*, not ſo common in *Spain*, and ſcarce at all in the Territory of *Ferrara*: Nor eaſily to be found where it is moſt required, upon Oaks, leſs on Trees continually verdant. Although in ſome places the Olive eſcapeth it not, requiting its detriment in the delightful view of its red Berries; as *Cluſius* obſerved in *Spain*, and *Bellonius* about *Hieruſalem*. But this Paraſitical Plant ſuffers nothing to grow upon it, by any way of Art; nor could we ever make it grow where Nature had not planted it, as we have in vain attempted by inoculation and inciſion, upon its native or foreign ſtock. And though there ſeem nothing improbable in the Seed, it hath not ſucceeded by ſation in any manner of ground, wherein we had no reaſon to deſpair, ſince we read of Vegetable Horns, and how Rams-horns will root about *Goa*.

But beſides theſe Rural Commodities, it cannot be meanly delectable in the variety of Figures, which theſe orders open, and cloſed do make. Whileſt every Incloſure makes a *Rhombus*, the Figures obliquely taken a *Rhomboides*, the Intervals bounded with Parallel Lines, and each Interſection built upon a Square, affording two Triangles or Pyramids vertically conjoyned; which in the ſtrict Quincuncial Order do oppoſitely make acute and blunt Angles. *Linſchoten.*

And though therein we meet not with right Angles, yet every *Rhombus* containing four Angles equal unto two right, it virtually contains two right in every one. Nor is this ſtrange unto ſuch as obſerve the natural lines of Trees, and parts diſpoſed in them. For neither in the Root doth Nature affect this Angle, which ſhooting downward for the ſtability of the Plant, doth beſt effect the ſame by Figures of Inclination: Nor in the Branches and ſtalky Leaves, which grow moſt at acute Angles; as declining from their Head the Root, and diminiſhing their Angles with their Altitude: Verified alſo in leſſer Plants, whereby they better ſupport themſelves, and bear not ſo heavily upon the ſtalk: So that while near the Root they often make an Angle of ſeventy parts, the ſprouts near the top will often come ſhort of thirty. Even in the Nerves and Maſter Veins of the Leaves the acute Angle ruleth; the obtuſe but ſeldom found, and in the backward part of the Leaf, reflecting and arching about the Stalk. But why oft-times one ſide of the Leaf is unequal unto the other, as in Hazle and Oaks, why on either ſide the Maſter Vein, the leſſer and derivative Chanels not directly oppoſite, nor at equal Angles, reſpectively unto the adverſe ſide, but thoſe of one part do often exceed the other, as the Wall-nut and many more, deſerves another enquiry.

Now if for this Order we affect coniferous and tapering Trees, particularly the Cypreſs, which grows in a conical Figure; we have found a Tree not only of great Ornament, but in its Eſſentials of affinity unto this Order: A ſolid *Rhombus* being made by the converſion of two Equicrural Cones, as *Archimedes* hath defined. And theſe were the common Trees about *Babylon*, and the Eaſt, whereof the Ark was made; and *Alexander* found no Trees ſo accommodable to build his Navy; And this we rather think to be the Tree mentioned in the *Canticles*, which ſtricter Botanology will hardly allow to be Camphire.

And if delight or ornamental view invite a comely diſpoſure by Circular amputations, as is elegantly performed in Hawthorns; then will they anſwer the Figures made by the converſion of a *Rhombus*, which maketh two concentrical Circles; the greater Circumference being made by the leſſer Angles, the leſſer by the greater.

The Cylindrical Figure of Trees is virtually contained and latent in this Order; A Cylinder or long round, being made by the converſion or turning of a Parallelogram, and moſt handſomely by a long Square, which makes an equal, ſtrong, and laſting Figure in Trees, agreeable unto the body and motive parts of Animals, the greateſt number of Plants, and almoſt all Roots, though their ſtalks be angular, and of many corners, which ſeem not to follow the figure of their Seeds; Since many angular Seeds ſend forth round ſtalks, and ſphærical ſeeds ariſe from angular ſpindles, and many rather conform unto their Roots, as the round ſtalks of bulbous Roots, and in tuberous Roots ſtemms of like Figure. But why ſince the largeſt number of Plants maintain a circular Figure, there are ſo few with teretous or long-round leaves; why coniferous Trees are tenuifolious or narrow-leafed; why Plants of few or no joynts have commonly round ſtalks; why the greateſt number of hollow ſtalks are round ſtalks; or why in this variety of angular ſtalks the quadrangular moſt exceedeth, were too long a ſpeculation: Mean while obvious experience may find, that in Plants of divided leaves above, Nature often beginneth circularly in the two firſt leaves below, while in the ſingular Plant of Ivy ſhe exerciſeth a contrary Geometry, and beginning with angular leaves below, rounds them in the upper branches.

Nor can the rows in this order want delight, as carrying an aſpect anſwerable unto the *dipteros hypæthros*, or double order of columns open above; the oppoſite ranks of Trees ſtanding like Pillars in the *Cavedia* of the Courts of famous Buildings, and the *Portico*'s of the *Templa ſubdialia* of old; Somewhat imitating the *Periſtylia* or Cloyſter-Buildings, and the *Exedræ* of the Ancients, wherein men diſcourſed, walked and exerciſed; For that they derived the rule of Columns from Trees, eſpecially in their proportional diminutions, is illuſtrated by *Vitruvius* from the Shafts of Firr and Pine. And though the inter-arboration do imitate the *Areoſtylos*, or thin order, not ſtrictly anſwering the proportion of intercolumniations; yet in many Trees they will not exceed the intermiſſion of the Columns in the Court of the Tabernacle; which being an hundred cubits long, and made up by twenty Pillars, will afford no leſs than intervals of five cubits.

Beſide, in this kind of aſpect the ſight being not diffuſed, but circumſcribed between long parallels and the ἐπισκιασμὸς and adumbration from the branches, it frameth a Penthouſe over the Eye, and maketh a quiet Viſion: And therefore in diffuſed and open aſpects, men hollow their hand above their Eye, and make an artificial Brow, whereby they direct the diſperſed rays of ſight; and by this ſhade preſerve a moderate light in the chamber of the eye; keeping the *Pupilla* plump and fair, and not contracted or ſhrunk, as in Light and vagrant Viſion.

And therefore Providence hath arched and paved the great Houſe of the World, with colours of mediocrity, that is, blue and green, above and below the Sight, moderately terminating the *Acies* of the Eye. For moſt Plants, though green above-ground, maintain their original white below it, according to the candour of their ſeminal pulp, and the rudimental leaves do firſt appear in that colour; obſervable in Seeds ſprouting in water upon their firſt foliation. Green ſeeming to be the firſt ſupervenient, or above-ground complexion of Vegetables, ſeparable in many upon Ligature or Inhumation, as Succory, Endive, Artichoaks, and which is alſo loſt upon fading in the Autumn.

And this is alſo agreeable unto water it ſelf, the alimental vehicle of Plants, which firſt altereth into this colour; And containing many Vegetable Seminalities, revealeth their Seeds by greenneſs; and therefore ſooneſt expected in Rain or ſtanding water, not eaſily found in diſtilled or water ſtrongly boiled; wherein the Seeds are extinguiſhed by fire and decoction, and therefore laſt long and pure without ſuch alteration, affording neither uliginous Coats, Gnat-worms, *Acari*, Hair worms, like crude and common water; And therefore moſt fit for wholſome Beverage and with Malt, makes Ale and Beer without boiling. What large water-drinkers ſome

Plants

Plants are, the Canary-Tree and Birches in ſome Northern Countries, drenching the Fields about them, do ſufficiently demonſtrate. How water it ſelf is able to maintain the growth of Vegetables, and without extinction of their generative or medical Vertues; beſide the experiment of *Helmont*'s Tree, we have found in ſome which have lived ſix years in glaſſes. The Seeds of Scurvy-graſs growing in water-pots, have been fruitful in the Land; And *Aſarum* after a years ſpace, and once caſting its leaves in water, in the ſecond leaves hath handſomely performed its vomiting operation.

Nor are only dark and green colours, but ſhades and ſhadows contrived through the great Volume of Nature, and Trees ordained not only to protect and ſhadow others, but by their ſhades and ſhadowing parts, to preſerve and cheriſh themſelves. The whole radiation or branchings ſhadowing the ſtock and the root; the leaves, the branches and fruit, too much expoſed to the winds and ſcorching Sun. The calicular Leaves incloſe the tender Flowers, and the Flowers themſelves lie wrapt about the Seeds, in their rudiment and firſt formations, which being advanced, the Flowers fall away; and are therefore contrived in variety of Figures, beſt ſatisfying the intention; Handſomely obſervable in hooded and gaping Flowers, and the Butterfly blooms of leguminous Plants, the lower leaf cloſely involving the rudimental Cod, and the alary or wingy diviſions embracing or hanging over it.

But Seeds themſelves do lie in perpetual ſhades, either under the leaf, or ſhut up in coverings; And ſuch as lie bareſt, have their husks, skins, and pulps about them, wherein the Nebb and generative Particle lyeth moiſt and ſecured from the injury of Air and Sun. Darkneſs and Light hold interchangeable Dominions, and alternately rule the ſeminal ſtate of things. Light unto * *Plato* is Darkneſs unto *Jupiter*. Legions of ſeminal *Idea's* lie in their ſecond Chaos and *Orcus* of *Hippocrates*; till putting on the habits of their forms, they ſhew themſelves upon the ſtage of the World, and open Dominion of *Jove*. They that held the Stars of Heaven were but rays and flaſhing glimpſes of the Empyreal Light, through holes and perforations of the upper Heaven, took off the natural ſhadows of Starrs; while according to better diſcovery the poor Inhabitants of the Moon have but a polary Life, and muſt paſs half their days in the ſhadow of that Luminary.

* *Lux orco, tenebræ Jovi, tenebræ orco, lux Jovi.* Hippocr. *de dieta.*

S. Hevelii Selenographia.

Light that makes things ſeen, makes ſome things inviſible, were it not for Darkneſs and the ſhadow of the Earth, the nobleſt part of the Creation had remained unſeen, and the Starrs in Heaven as inviſible as on the fourth day, when they were created above the Horizon, with the Sun, or there was not an Eye to behold them. The greateſt myſtery of Religion is expreſſed by adumbration, and in the nobleſt part of Jewiſh Types, we find the Cherubims ſhadowing the Mercy-ſeat: Life it ſelf is but the ſhadow of Death, and Souls departed but the ſhadows of the Living: All things fall under this Name. The Sun it ſelf is but the dark *ſimulachrum*, and Light but the ſhadow of God.

Laſtly, It is no wonder that this Quincuncial order was firſt and ſtill affected as grateful unto the Eye: For all things are ſeen Quincuncially; For at the eye the Pyramidal rays from the object, receive a decuſſation, and ſo ſtrike a ſecond Baſe upon the *Retina* or hinder Coat, the proper Organ of Viſion; wherein the Pictures from Objects are repreſented, anſwerable to the Paper, or Wall in the dark Chamber; after the decuſſation of the rays at the hole of the Horny-Coat, and their refraction upon the Cryſtalline humour, anſwering the *foramen* of the Window, and the Convex or Burning-glaſſes, which refract the rays that enter it. And if ancient Anatomy would hold, a like diſpoſure there was of the optick or viſual Nerves in the Brain, wherein Antiquity conceived a concurrence by decuſſation. And this not only obſervable in the Laws of direct Viſion, but in ſome part alſo verified in the reflected rays of Sight. For making the Angle of Incidence equal to that of Reflection, the viſual ray returneth Quincuncially, and after the form of a V; and the line of Reflection being continued unto the place of Viſion, there ariſeth a ſemi-decuſſation which

makes

makes the object ſeen in a perpendicular unto it ſelf, and as far below the reflectent, as it is from it above; obſervable in the Sun and Moon beheld in Water.

And this is alſo the Law of reflexion in moved bodies and ſounds, which though not made by decuſſation, obſerve the rule of equality between incidence and reflexion; whereby whiſpering places are framed by Elliptical arches laid ſide-wiſe; where the voice being delivered at the *focus* of one extremity, obſerving an equality unto the angle of incidence, it will reflect unto the *focus* of the other end, and ſo eſcape the ears of the ſtanders in the middle.

A like rule is obſerved in the reflection of the vocal and ſonorous line in Echoes, which cannot therefore be heard in all ſtations. But happening in woody plantations, by waters, and able to return ſome words; if reacht by a pleaſant and well-dividing voice, there may be heard the ſofteſt notes in nature.

And this not only verified in the way of ſenſe, but in animal and intellectual receptions: Things entring upon the intellect by a Pyramid from without, and thence into the memory by another from within, the common decuſſation being in the underſtanding as is delivered by **Bovillus*. Whether the intellectual and phantaſtical lines be not thus rightly diſpoſed, but magnified, diminiſhed, diſtorted, and ill placed in the Mathematicks of ſome brains, whereby they have irregular apprehenſions of things, perverted notions, conceptions, and incurable hallucinations, were no unpleaſant ſpeculation.

* *Car. Bovillus de intellectu.*

And if *Ægyptian* Philoſophy may obtain, the ſcale of influences was thus diſpoſed, and the genial ſpirits of both Worlds do trace their way in aſcending and deſcending Pyramids, myſtically apprehended in the Letter X, and the open Bill and ſtradling Legs of a Stork, which was imitated by that Character.

Of this Figure *Plato* made choice to illuſtrate the motion of the Soul, both of the World and Man; while he delivereth that God divided the whole conjunction length-wiſe, according to the figure of a Greek X, and then turning it about reflected it into a circle; By the circle implying the uniform motion of the firſt Orb, and by the right lines, the planetical and various motions within it. And this alſo with application unto the Soul of Man, which hath a double aſpect, one right, whereby it beholdeth the body, and objects without; another circular and reciprocal, whereby it beholdeth it ſelf. The circle declaring the motion of the indiviſible Soul, ſimple, according to the divinity of its nature, and returning into it ſelf; the right lines reſpecting the motion pertaining unto ſenſe, and vegetation; and the central decuſſation, the wondrous connexion of the ſeveral faculties conjointly in one ſubſtance. And ſo conjoyned the unity and duality of the Soul, and made out the three ſubſtances ſo much conſidered by him; That is, the indiviſible or divine, the diviſible or corporeal, and that third, which was the *Syſtaſis* or harmony of thoſe two, in the myſtical decuſſation.

And if that were clearly made out which *Juſtin Martyr* took for granted, this figure hath had the honour to characterize and notifie our Bleſſed Saviour, as he delivereth in that borrowed expreſſion from *Plato*; *Decuſſavit eum in univerſo*, the hint whereof he would have *Plato* derive from the figure of the Brazen Serpent, and to have miſtaken the Letter X for T: whereas it is not improbable, he learned theſe and other myſtical expreſſions in his learned Obſervations of *Ægypt*, where he might obviouſly behold the Mercurial Characters, the handed croſſes, and other myſteries not throughly underſtood in the ſacred Letter X; which being derivative from the Stork, one of the ten ſacred Animals, might be originally *Ægyptian*, and brought into *Greece* by *Cadmus* of that Country.

CHAP.

CHAP. V.

TO enlarge this contemplation unto all the mysteries and secrets accommodable unto this number, were inexcusable Pythagorism, yet cannot omit the ancient conceit of *five* surnamed the number of * *justice*; as justly dividing between the digits, and hanging in the centre of Nine, described by square numeration, which angularly divided will make the decussated number; and so agreeable unto the Quincuncial Ordination, and rows divided by Equality, and just *decorum*, in the whole com-plantation; And might be the Original of that common game among us, wherein the fifth place is Soveraign, and carrieth the chief intention. The Ancients wisely instructing youth, even in their recreations unto virtue, that is, early to drive at the middle point and Central Seat of Justice.

* Δίκη.

Nor can we omit how agreeable unto this number an handsom division is made in Trees and Plants, since *Plutarch*, and the Ancients have named it the Divisive Number, justly dividing the Entities of the World, many remarkable things in it, and also comprehending the † general division of Vegetables. And he that considers how most blossoms of Trees, and greatest number of Flowers, consist of five leaves; and therein doth rest the settled rule of nature. So that in those which exceed, there is often found, or easily made a variety; may readily discover how nature rests in this number, which is indeed the first rest and pause of numeration in the fingers, the natural Organs thereof. Nor in the division of the feet of perfect Animals doth nature exceed this account. And even in the joints of feet, which in Birds are most multiplied, surpasseth not this number; So progressionally making them out in many, that from five in the fore-claw she descendeth unto two in the hindmost; And so in four feet makes up the number of joynts, in the five fingers or toes of Man.

† Δένδρον, Θάμνος, Φρύγανον, Πόα, *Arbor, frutex, suffrutex, herba*, and that fifth which comprehendeth the *fungi* and *tubera*, whether to be named *Αχλυν or γύμνον, comprehending also *conferva marina salsa*, and Sea-cords, of so many yards length.

Not to omit the Quintuple Section of a * Cone, of handsom practice in Ornamental Garden-plots, and in some way discoverable in so many works of Nature; In the leaves, fruits, and seeds of Vegetables, and scales of some Fishes; so much considerable in Glasses, and the optick Doctrine; wherein the learned may consider the Crystalline humour of the eye in the Cuttle-fish and *Loligo*.

* *Elleipsis, parabola, Hyperbole, Circulus, Triangulum.*

He that forgets not how Antiquity named this, the Conjugal or Wedding number, and made it the Embleme of the most remarkable conjunction, will conceive it duly appliable unto this handsom Oeconomy, and vegetable combination; and may hence apprehend the Allegorical sence of that obscure expression of † *Hesiod*, and afford no improbable reason why *Plato* admitted his Nuptial guests by fives, in the kindred of the * married couple.

† πέμπτας, *id est, nuptias multas.* Rhodig.

* Plato *de leg. 6.*

And though a sharper mystery might be implied in the Number of the five wise and foolish Virgins, which were to meet the Bridegroom, yet was the same agreeable unto the Conjugal Number, which ancient Numerists made out by two and three, the first parity and imparity, the active and passive digits, the material and formal principles in generative Societies. And not discordant even from the customs of the *Romans*, who admitted but † five Torches in their Nuptial Solemnities. Whether there were any mystery or not, implied, the most generative Animals were created on this day, and had accordingly the largest benediction: And under a Quintuple consideration, wanton Antiquity considered the Circumstances of generation, while by this number of five, they naturally divided the Nectar of the fifth Planet.

† *Plutarch. problem. Rom.* 1.

The same number in the *Hebrew* mysteries and Cabalistical accounts was the * Character of Generation; declared by the Letter *He*, the fifth in their Alphabet; According to that Cabalistical *Dogma*: If *Abram* had not had this Letter added unto his Name, he had remained fruitless, and without

* *Archang. dog Cabal.*

out the power of generation: Not only becauſe hereby the number of his Name attained two hundred forty eight, the number of the affirmative precepts, but becauſe as in created natures there is a Male and Female, ſo in divine and intelligent productions, the Mother of Life and Fountain of Souls in Cabaliſtical Technology is called *Binah*, whoſe Seal and Character was *He*. So that being ſteril before, ſhe received the power of generation from that meaſure and manſion in the Archetype; and was made conformable unto *Binah*. And upon ſuch involved conſiderations, the * *ten* of *Sarai* was exchanged into *five*. If any ſhall look upon this as a ſtable number, and fitly appropriable unto Trees, as Bodies of Reſt and Station, he hath herein a great Foundation in Nature, who obſerving much variety in legs and motive Organs of Animals, as two, four, ſix, eight, twelve, fourteen, and more, hath paſſed over five and ten, and aſſigned them unto none, or very few, as the *Phalangium monſtroſum Braſilianum*, *Cluſii & Jac. de Laet. Cur poſter. Americæ Deſcript.* if perfectly deſcribed. And for the ſtability of this Number, he ſhall not want the ſphericity of its nature, which multiplied in it ſelf, will return into its own denomination, and bring up the rere of the account. Which is alſo one of the Numbers that makes up the myſtical Name of God, which conſiſting of Letters denoting all the ſphærical Numbers, ten, five, and ſix; Emphatically ſets forth the Notion of *Triſmegiſtus*, and that intelligible Sphere, which is the Nature of God.

* *Jod* into *He*.

Many expreſſions by this Number occur in Holy Scripture, perhaps unjuſtly laden with myſtical Expoſitions, and little concerning our order. That the *Iſraelites* were forbidden to eat the Fruit of their new planted Trees, before the fifth year, was very agreeable unto the natural Rules of Husbandry: Fruits being unwholſome and laſh, before the fourth, or fifth Year. In the ſecond day or Feminine part of five, there was added no approbation. For in the third or maſculine day, the ſame is twice repeated; and a double benediction incloſed both Creations, whereof the one, in ſome part was but an accompliſhment of the other. That the Treſpaſſer was to pay a fifth part above the head or principal, makes no ſecret in this Number, and implied no more than one part above the principal; which being conſidered in four parts, the additional forfeit muſt bear the Name of a fifth. The five golden Mice had plainly their determination from the number of the Princes. That five ſhould put to flight an hundred might have nothing myſtically implied; conſidering a rank of Soldiers could ſcarce conſiſt of a leſſer number. Saint *Paul* had rather ſpeak five words in a known, than ten thouſand in an unknown Tongue: That is as little as could well be ſpoken; A ſimple propoſition conſiſting of three words, and a complexed one not ordinarily ſhort of five.

Lev. 6.

More conſiderable there are in this myſtical account, which we muſt not inſiſt on. And therefore why the radical Letters in the Pentateuch ſhould equal the number of the Soldiery of the Tribes; Why our Saviour in the Wilderneſs fed five thouſand perſons with five Barley Loaves, and again, but four thouſand with no leſs than ſeven of Wheat? Why *Joſeph* deſigned five changes of Raiment unto *Benjamin*? and *David* took juſt five Pibbles out of the Brook againſt the *Pagan* Champion? We leave it unto Arithmetical Divinity, and Theological explanation.

πέντε ἕνεκα, four and one, or five. *Scalig.*

Yet if any delight in new Problems, or think it worth the inquiry, whether the Critical Phyſician hath rightly hit the nominal notation of *Quinque*; Why the Ancients mixed five or three, but not four parts of Water unto their Wine: And *Hippocrates* obſerved a fifth proportion in the mixture of Water with Milk, as in *Dyſenteries* and bloody fluxes. Under what abſtruſe foundation Aſtrologers do Figure the good or bad Fate from our Children, in (*a*) *good Fortune*, or the fifth Houſe of their Celeſtial Schemes. Whether the *Ægyptians* deſcribed a Star by a Figure of five points, with reference unto the (*b*) five Capital aſpects, whereby they tranſmit their Influences, or abſtruſer Conſiderations? Why the Cabaliſtical Doctors, who conceive the whole *ephiroth*, or divine emanations to have guided the ten-ſtringed Harp of *David*, whereby he pacified the evil Spirit of *Saul*, in ſtrict numera-

(*a*) Ἀγαθὴ τύχη. or *bona fortuna*, the name of the fifth houſe.

(*b*) Conjunct, oppoſite, ſextile, trigonal, tetragonal.

numeration do begin with the Perihypate Meson, or *ff fa ut*, and so place the Tiphereth answering *C sol fa ut*, upon the fifth String: Or whether this number be oftner applied unto bad things and ends, than good in Holy Scripture, and why? He may meet with abstrusities of no ready resolution.

If any shall question the rationality of that Magick, in the cure of the blind Man by *Serapis*, commanded to place five fingers on his Altar, and then his hand on his Eyes? Why since the whole Comedy is primarily and naturally comprised in * four parts, and Antiquity permitted not so many persons to speak in one Scene, yet would not comprehend the same in more or less than five Acts? Why amongst Sea-Stars Nature chiefly delighteth in five points? And since there are found some of no fewer than twelve, and some of seven, and nine, there are few or none discovered of six or eight? If any shall inquire why the Flowers of *Rue* properly consist of four Leaves, The first and third Flower have five? Why since many Flowers have one leaf or † none, as *Scaliger* will have it, divers three, and the greatest number consist of five divided from their bottoms; there are yet so few of two: or why Nature generally beginning or setting out with two opposite Leaves at the Root, doth so seldome conclude with that order and number at the Flower? he shall not pass his hours in vulgar speculations.

* Πρότασις, ἐπίτασις, κατάστασις, καταστροφή.

† *unifolium, nullifolium.*

If any shall further quæry why magnetical Philosophy excludeth decussations, and Needles transversly placed do naturally distract their verticities? Why Geomancers do imitate the Quintuple Figure, in their Mother Characters of Acquisition and Amission, *&c.* somewhat answering the Figures in the Lady or speckled Beetle? With what Equity Chiromantical conjecturers decry these decussations in the Lines and Mounts of the hand? What that decussated Figure intendeth in the Medal of *Alexander* the Great? Why the Goddesses sit commonly cross-legged in ancient draughts, since *Juno* is described in the same as a veneficial posture to hinder the birth of *Hercules*? If any shall doubt why at the Amphidromical Feasts, on the fifth day after the Child was born, Presents were sent from Friends, of *Polypus*'s, and Cuttle-fishes? Why five must be only left in that Symbolical mutiny among the Men of *Cadmus*? Why *Proteus* in *Homer*, the Symbol of the first matter, before he settled himself in the midst of his Sea-monsters, doth place them out by fives? Why the fifth years Ox was acceptable Sacrifice unto *Jupiter*? Or why the Noble *Antoninus* in some sense doth call the Soul it self a *Rhombus*? He shall not fall on trite or trivial disquisitions. And these we invent and propose unto acuter Inquirers, nauseating crambe verities and questions over-quæried. Flat and flexible truths are beat out by every hammer; but *Vulcan* and his whole Forge sweat to work out *Achilles* his Armour. A large Field is yet left unto sharper discerners to enlarge upon this order, to search out the *quaternio*'s and figured draughts of this nature, and moderating the study of Names, and meer nomenclature of Plants, to erect generalities, disclose unobserved proprieties, not only in the vegetable shop, but the whole volume of nature; affording delightful Truths, confirmable by sense and ocular observation, which seems to me the surest path to trace the Labyrinth of Truth. For though discursive inquiry and rational conjecture may leave handsome gashes and flesh-wounds; yet without conjunction of this, expect no mortal or dispatching blows unto error.

But the * Quincunx of Heaven runs low, and 'tis time to close the five ports of knowledge; We are unwilling to spin out our awaking thoughts into the phantasms of sleep, which often continueth præcogitations; making Cables of Cobwebs, and Wildernesses of handsome Groves. Beside, † *Hippocrates* hath spoke so little, and the * Oneirocritical Masters have left such frigid Interpretations from Plants, that there is little encouragement to dream of Paradise it self. Nor will the sweetest delight of Gardens afford much comfort in sleep; wherein the dulness of that sense shakes hands with delectable odours; and though in the † Bed of *Cleopatra*, can hardly with any delight raise up the ghost of a Rose.

* *Hyades* near the Horizon about midnight, at that time.

† *De Insomniis.*

* *Artemidorus, & Apomazar.*

† Strewed with Roses.

Night

Night which *Pagan* Theology could make the Daughter of *Chaos*, affords no advantage to the deſcription of order: Although no lower than that Maſs can we derive its Genealogy. All things began in order, ſo ſhall they end, and ſo ſhall they begin again; according to the ordainer of order and myſtical Mathematicks of the City of Heaven.

Though *Somnus* in *Homer* be ſent to rouſe up *Agamemnon*, I find no ſuch effects in theſe drouſie approaches of ſleep. To keep our eyes open longer, were but to act our *Antipodes*. The Huntſmen are up in *America*, and they are already paſt their firſt ſleep in *Perſia*. But who can be drowſie at that hour which freed us from everlaſting ſleep? or have ſlumbring thoughts at that time, when ſleep it ſelf muſt end, and as ſome conjecture all ſhall awake again?

F I N I S.

The *Stationer* to the *Reader.*

I Cannot omit to advertiſe, That a Book was publiſhed not long ſince, Entituled, Natures Cabinet Unlockt, *bearing the Name of this Author: If any Man have been benefited thereby, this Author is not ſo ambitious as to challenge the honour thereof, as having no hand in that Work. To diſtinguiſh of true and ſpurious Pieces was the Original Criticiſm; and ſome were ſo handſomly counterfeited, that the Entitled Authors needed not to diſclaim them. But ſince it is ſo, that either he muſt write himſelf, or others will write for him, I know no better Prevention than to act his own part with leſs intermiſſion of his Pen.*

CERTAIN MISCELLANY TRACTS.

Written by

THOMAS BROWN, K^t

and Doctor of Physick; late of *NORWICH.*

LONDON,

Printed for *Charles Mearn,* Bookseller to His most Sacred Majesty, MDCLXXXVI.

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THE PUBLISHER TO THE READER.

THE Papers from which theſe *Tracts* were printed, were, a while ſince, delivered to me by thoſe worthy perſons, the *Lady* and *Son* of the excellent Author. He himſelf gave no charge concerning his *Manuſcripts*, either for the ſuppreſſing or the publiſhing of them. Yet, ſeeing he had procured *Tranſcripts* of them, and had kept thoſe *Copies* by him, it ſeemeth probable, that he deſigned them for publick uſe.

Thus much of his Intention being preſumed, and many who had taſted of the fruits of his former Studies being covetous of more of the like kind; Alſo theſe *Tracts* having been peruſed and much approved of by ſome Judicious and Learned men; I was not unwilling to be inſtrumental in fitting them for the Preſs.

To this end, I ſelected them out of many diſordered Papers, and diſpos'd them into ſuch a method as They ſeem'd capable of; beginning firſt with *Plants*, going on to *Animals*, proceeding farther to things relating to *Men*, and concluding with *matters* of a *various nature*.

Concerning the *Plants*, I did, on purpoſe, forbear to range them (as ſome adviſed) according to their *Tribes* and *Families*; becauſe, by ſo doing, I ſhould have repreſented that as a ſtudied and formal Work, which is but a Collection of *occaſional Eſſayes*. And, indeed, both this *Tract*, and thoſe which follow, were rather the *Diverſions*, than the *Labours* of his Pen: and, becauſe, He did, as it were, drop down his Thoughts of a ſudden, in thoſe little ſpaces of vacancy which he ſnatch'd from thoſe very many occaſions which gave him hourly interruption: If there appears, here and there, any

uncorrectneſs in the Style, a ſmall degree of Candour ſufficeth to excuſe it.

If there be any ſuch errors in the words, I'm ſure the Preſs has not made them fewer; but I do not hold my ſelf oblig'd to anſwer for That which I could not perfectly govern. However, the matter is not of any great moment: Such errors will not miſlead a Learned Reader; and He who is not ſuch in ſome competent degree, is not a fit Peruſer of theſe LETTERS. Such theſe *Tracts* are; but, for the Perſons to whom they were written, I cannot well learn their *Names* from thoſe few obſcure marks which the Author has ſet at the beginning of them. And theſe *Eſſayes* being *Letters*, as many as take offence at ſome few familiar things which the Author hath mixed with them, find fault with decence. Men are not wont to ſet down Oracles in every Line they write to their Acquaintance.

There, ſtill, remain other brief Diſcourſes written by this moſt Learned and Ingenious Author. Thoſe, alſo, may come forth, when ſome of his Friends ſhall have ſufficient leiſure; and at ſuch due diſtance from theſe *Tracts*, that They may follow rather than ſtifle them.

Amongſt theſe Manuſcripts there is one which gives a brief Account of all the *Monuments* of the *Cathedral* of *Norwich*. It was written meerly for private uſe: and the Relations of the Author expect ſuch Juſtice from thoſe into whoſe hands ſome imperfect Copies of it are fallen; that, without their Conſent firſt obtain'd, they forbear the publiſhing of It.

The truth is, matter equal to the skill of the Antiquary was not, there, afforded: had a fit Subject of that nature offer'd it ſelf, He would ſcarce have been guilty of an overſight like to that of *Auſonius*, who, in the deſcription of his native City of *Burdeaux*, omitted the two famous Antiquities of it, *Palais de Tutele*, and, *Palais de Galien*.

Concerning the *Author himſelf*, I chuſe to be ſilent, though I have had the happineſs to have been, for ſome years, known to him. There is on foot a deſign of writing his *Life*: and there are, already, ſome Memorials collected by one of his ancient Friends. Till that work be perfected, the Reader may content himſelf with theſe preſent *Tracts*; all which commending themſelves by their *Learning*, *Curioſity* and *Brevity*, if He be not pleaſed with them, he ſeemeth to me to be diſtemper'd with ſuch a niceneſs of Imagination, as no wiſe man is concern'd to humour.

Tho. Teniſon.

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TRACT

TRACT I.

OBSERVATIONS

Upon ſeveral

PLANTS

Mention'd in

SCRIPTURE.

SIR,

THough many ordinary Heads run ſmoothly over the Scripture, yet I muſt acknowledge, it is one of the hardeſt Books I have met with: and therefore well deſerveth thoſe numerous Comments, Expoſitions and Annotations which make up a good part of our Libraries. *The Introduction.*

However ſo affected I am therewith, that I wiſh there had been more of it: and a larger Volume of that Divine piece which leaveth ſuch welcome impreſſions, and ſomewhat more, in the Readers, than the words and ſenſe after it. At leaſt, who would not be glad that many things barely hinted were at large delivered in it? The particulars of the Diſpute between the Doctours and our Saviour could not but be welcome to them, who have every word in honour which proceeded from his Mouth, or was otherwiſe delivered by him: and ſo would be glad to be aſſured, what he wrote with his Finger on the ground: But eſpecially to have a particular

of

of that instructing Narration or Discourse which he made unto the Disciples after his resurrection, where 'tis said: *And beginning at Moses, and all the Prophets, he expounded unto them in all the Scriptures the things concerning himself.* Luke 24. 27.

But to omit Theological obscurities, you must needs observe that most Sciences do seem to have something more nearly to consider in the expressions of the Scripture.

Astronomers find therein the Names but of few Stars, scarce so many as in *Achilles* his *Buckler* in *Homer*, and almost the very same. But in some passages of the Old Testament they think they discover the Zodiacal course of the Sun: and they, also, conceive an Astronomical sense in that elegant expression of S. *James* concerning *the Father of lights, with whom there is no variableness, neither shadow of turning*: and therein an allowable allusion unto the tropical conversion of the Sun, whereby ensueth a variation of heat, light, and also of shadows from it. But whether the *Stellæ erraticæ*, or wandring Stars in S. *Jude*, may be referr'd to the celestial Planets, or some metereological wandring Stars, *Ignes fatui*, *Stellæ cadentes & erraticæ*, or had any allusion unto the Impostour *Barchochebas*, or *Stella Filius*, who afterward appeared, and wandred about in the time of *Adrianus*, they leave unto conjecture. Jam. 1. 17.

Chirurgeons may find their whole Art in that one passage, concerning the Rib which God took out of *Adam*, that is their διαίρεσις in opening the Flesh, ἐξαίρεσις in taking out the Rib, and σύνθεσις in closing and healing the part again.

Rhetoricians and Oratours take singular notice of very many excellent passages, stately metaphors, noble tropes and elegant expressions, not to be found or parallel'd in any other Authour.

Mineralists look earnestly into the twenty eighth of *Job*, take special notice of the early artifice in Brass and Iron, under *Tubal-Cain*: And find also mention of Gold, Silver, Brass, Tin, Lead, Iron; beside Refining, Sodering, Dross, Nitre, Salt-pits, and in some manner also of * Antimony.

* *Depinxit oculos stibio.* 2 King. 9. 30. Jerem. 4. 30. Ezek. 23. 40.

Gemmarie Naturalists read diligently the pretious Stones in the holy City of the *Apocalypse*: examine the Breast-plate of *Aaron*, and various Gemms upon it, and think the second Row the nobler of the four: they wonder to find the Art of Ingravery so ancient upon precious Stones and Signets; together with the ancient use of Ear-rings and Bracelets. And are pleased to find Pearl, Coral, Amber and Crystal in those sacred Leaves according to our Translation. And when they often meet with Flints and Marbles, cannot but take notice that there is no mention of the Magnet or Loadstone, which in so many similitudes, comparisons, and allusions, could hardly have been omitted in the Works of *Solomon*; if it were true that he knew either the attractive or directive power thereof, as some have believed.

Navigatours consider the Ark, which was pitched without and within, and could endure the Ocean without Mast or Sails: They take special notice of the twenty seventh of *Ezekiel*; the mighty Traffick and great Navigation of *Tyre*, with particular mention of their Sails, their Masts of Cedar, Oars of Oak, their skilfull Pilots, Mariners and Calkers; as also of the long Voyages of the Fleets of *Solomon*; of *Jehosaphat*'s Ships broken at *Ezion-Geber*; of the notable Voyage and Shipwreck of S. *Paul* so accurately delivered in the *Acts*.

Oneirocritical Diviners apprehend some hints of their knowledge, even from Divine Dreams; while they take notice of the Dreams of *Joseph*, *Pharaoh*, *Nebuchadnezzar*, and the Angels on *Jacob*'s Ladder; and find, in *Artemidorus* and *Achmetes*, that Ladders signifie Travels, and the Scales thereof Preferment; and that Oxen Lean and Fat naturally denote Scarcity or Plenty, and the successes of Agriculture.

Physiognomists will largely put in from very many passages of Scripture. And when they find in *Aristotle*, *quibus frons quadrangula, commensurata, forte referuntur ad leones*, cannot but take special notice of that expression concerning

concerning the Gadites; *mighty men of war, fit for battle, whose faces were as the faces of Lions.*

Geometrical and Architectonical Artists look narrowly upon the description of the Ark, the fabrick of the Temple, and the Holy City in the *Apocalypse.*

But the Botanical Artist meets every where with Vegetables, and from the Figg Leaf in *Genesis* to the Star Wormwood in the *Apocalypse*, are variously interspersed expressions from Plants, elegantly advantaging the significancy of the Text: Whereof many being delivered in a Language proper unto *Judæa* and neighbour Countries are imperfectly apprehended by the common Reader, and now doubtfully made out, even by the Jewish Expositour.

And even in those which are confessedly known, the elegancy is often lost in the apprehension of the Reader, unacquainted with such Vegetables, or but nakedly knowing their natures: whereof holding a pertinent apprehension, you cannot pass over such expressions without some doubt or want of satisfaction in your judgment. Hereof we shall onely hint or discourse some few which I could not but take notice of in the reading of holy Scripture.

Many Plants are mention'd in Scripture which are not distinctly known in our Countries, or under such Names in the Original, as they are fain to be rendred by analogy, or by the name of Vegetables of good affinity unto them, and so maintain the textual sense, though in some variation from identity.

The Observations.

1. That Plant which afforded a shade unto * *Jonah*, mention'd by the name of Kikaion, and still retained at least marginally in some Translations, to avoid obscurity *Jerome* rendred *Hedera* or Ivy; which notwithstanding (except in its scandent nature) agreed not fully with the other, that is, to *grow up in a night*, or be consumed with a Worm; Ivy being of no swift growth, little subject unto Worms, and a scarce Plant about *Babylon.*

Kikaion.
* Jona 4. 6.
a Gourd.

2. That Hyssope is taken for that Plant which cleansed the Leper, being a well scented, and very absterstive Simple, may well be admitted; so we be not too confident, that it is strictly the same with our common Hyssope: The Hyssope of those parts differing from that of ours; as *Bellonius* hath observed in the Hyssope which grows in *Judæa*, and the Hyssope of the Wall mention'd in the Works of *Solomon*, no kind of our Hyssope; and may tolerably be taken for some kind of minor Capillary, which best makes out the Antithesis with the Cedar. Nor when we meet with *Libanotis*, is it to be conceived our common Rosemary, which is rather the first kind thereof among several others, used by the Ancients.

Hyssope.

3. That it must be taken for Hemlock, which is twice so rendred in our Translation, will hardly be made out, otherwise than in the intended sense, and implying some Plant, wherein bitterness or a poisonous quality is considerable.

Hemlock.
Hosea 10. 4.
Amos 6. 2.

4. What *Tremellius* rendreth *Spina*, and the Vulgar Translation *Paliurus*, and others make some kind of *Rhamnus*, is allowable in the sense; and we contend not about the species, since they are known Thorns in those Countries, and in our Fields or Gardens among us: and so common in *Judæa*, that Men conclude the thorny Crown of our Saviour was made either of *Paliurus* or *Rhamnus.*

Paliurus.

5. Whether the Bush which burnt and consumed not, were properly a *Rubus* or Bramble, was somewhat doubtfull from the Original and some Translations, had not the Evangelist, and S. *Paul* express'd the same by the Greek word Βάτος, which from the description of *Dioscorides*, Herbarists accept for *Rubus*; although the same word Βάτος expresseth not onely the *Rubus* or kinds of Bramble, but other Thorn-bushes, and the Hipp-briar is also named Κυνοσβάτος, or the Dog-briar or Bramble.

Rubus.

6. That *Myrica* is rendred, Heath, sounds instructively enough to our Ears, who behold that Plant so common in barren Plains among us: But you cannot but take notice that *Erica*, or our Heath is not the same Plant

Myrica.
Cant. 1. 14.

with *Myrica* or Tammarice, described by *Theophrastus* and *Dioscorides*, and which *Bellonius* declareth to grow so plentifully in the Desarts of *Judæa* and *Arabia*.

Cypress. Cant. 1. 14.

7. That the βότρυς τῆς Κύπρου, *botrus Cypri*, or Clusters of Cypress, should have any reference to the Cypress Tree, according to the original *Copher*, or Clusters of the noble Vine of *Cyprus*, which might be planted into *Judæa*, may seem to others allowable in some latitude. But there seeming some noble Odour to be implied in this place, you may probably conceive that the expression drives at the Κύπρος of *Dioscorides*, some oriental kind of *Ligustrum* or *Alcharma*, which *Dioscorides* and *Pliny* mention under the name of Κύπρος and *Cyprus*, and to grow about *Ægypt* and *Ascalon*, producing a sweet and odorate bush of Flowers, and out of which was made the famous *Oleum Cyprinum*.

But why it should be rendred Camphyre your judgment cannot but doubt, who know that our Camphyre was unknown unto the Ancients, and no ingredient into any composition of great Antiquity: that learned Men long conceived it a bituminous and fossile Body, and our latest experience discovereth it to be the resinous substance of a Tree, in *Borneo* and *China*; and that the Camphyre that we use is a neat preparation of the same.

Shittah Tree, &c. Isa. 41. 19.

8. When 'tis said in *Isaiah* 41. *I will plant in the wilderness the Cedar, the Shittah Tree, and the Myrtle and the Oil Tree, I will set in the Desart, the Firre Tree, and the Pine, and the Box Tree:* Though some doubt may be made of the Shittah Tree, yet all these Trees here mentioned being such as are ever green, you will more emphatically apprehend the mercifull meaning of God in this mention of no fading, but always verdant Trees in dry and desart places.

Grapes of Eshcol. Num. 13. 23. * ἄπιστος θέα. Philo.

9. *And they cut down a Branch with one cluster of Grapes, and they bare it between two upon a Staff, and they brought Pomegranates and Figgs.* This cluster of Grapes brought upon a staff by the Spies, was an incredible sight, in * *Philo Judæus*, seem'd notable in the eyes of the Israelites, but more wonderfull in our own, who look only upon Northern Vines. But herein you are like to consider, that the Cluster was thus carefully carried to represent it entire, without bruising or breaking; that this was not one Bunch but an extraordinary Cluster, made up of many depending upon one gross stalk. And however, might be parallel'd with the Eastern Clusters of *Margiana* and *Caramania*, if we allow but half the expressions of *Pliny* and *Strabo*, whereof one would lade a Curry or small Cart; and may be made out by the clusters of the Grapes of *Rhodes* presented unto Duke * *Radzivil*, each containing three parts of an Ell in compass, and the Grapes as big as Prunes.

* Radzivil *in his Travels.*

Ingred. of Holy Perfume. Stacte, &c. Exod. 30. 34, 35.

10. Some things may be doubted in the species of the Holy Ointment and perfume. With Amber, Musk and Civet we meet not in the Scripture, nor any Odours from Animals; except we take the Onycha of that Perfume for the Covercle of a Shell-fish called *Unguis Odoratus*, or *Blatta Byzantina*, which *Dioscorides* affirmeth to be taken from a Shell-fish of the Indian Lakes, which feeding upon the Aromatical Plants is gathered when the Lakes are drie. But whether that which we now call *Blatta Byzantina*, or *Unguis Odoratus*, be the same with that odorate one of Antiquity, great doubt may be made; since *Dioscorides* saith it smelled like *Castoreum*, and that which we now have is of an ungratefull odour.

No little doubt may be also made of Galbanum prescribed in the same Perfume, if we take it for Galbanum which is of common use among us, approaching the evil scent of *Assa Fœtida*; and not rather for Galbanum of good odour, as the adjoining words declare, and the original *Chelbena* will bear; which implies a fat or resinous substance, that which is commonly known among us being properly a gummous body and dissoluble also in Water.

The Holy Ointment of Stacte or pure Myrrh, distilling from the Plant without expression or firing, of Cinnamon, Cassia and Calamus, containeth less questionable species, if the Cinnamon of the Ancients were the same with ours, or managed after the same manner. For thereof *Dioscorides* made his noble Unguent. And Cinnamon was so highly valued

valued by Princes, that *Cleopatra* carried it unto her Sepulchre with her Jewels; which was also kept in wooden Boxes among the rarities of Kings: and was of such a lasting nature, that at his composing of Treacle for the Emperour *Severus*, *Galen* made use of some which had been laid up by *Adrianus*.

Husks eaten by the Prodigal. Luke 15. 16.

11. That the Prodigal Son desired *to eat of Husks* given unto Swine, will hardly pass in your apprehension for the Husks of Pease, Beans, or such edulious Pulses; as well understanding that the textual word Κεράτιον or *Ceration*, properly intendeth the Fruit of the *Siliqua* Tree so common in *Syria*, and fed upon by Men and Beasts; called also by some the Fruit of the Locust Tree, and *Panis Sancti Johannis*, as conceiving it to have been part of the Diet of the *Baptist* in the Desart. The Tree and Fruit is not onely common in *Syria* and the Eastern parts, but also well known in *Apuglia*, and the Kingdom of *Naples*; growing along the *Via Appia*, from *Fundi* unto *Mola*; the hard Cods or Husks making a rattling noise in windy weather, by beating against one another: called by the Italians *Caróba* or *Caróbala*, and by the French *Carouges*. With the sweet Pulp hereof some conceive that the Indians preserve Ginger, Mirabolans and Nutmegs. Of the same (as *Pliny* delivers) the Ancients made one kind of Wine, strongly expressing the Juice thereof; and so they might after give the expressed and less usefull part of the Cods, and remaining Pulp unto their Swine: which being no gustless or unsatisfying Offal, might be well desired by the Prodigal in his hunger.

Cucumbers, &c. of Ægypt.

12. No marvel it is that the Israelites having lived long in a well watred Country, and been acquainted with the noble Water of *Nilus*, should complain for Water in the dry and barren Wilderness. More remarkable it seems that they should extoll and linger after the Cucumbers and Leeks, Onions and Garlick in *Ægypt*: wherein notwithstanding lies a pertinent expression of the Diet of that Country in ancient times, even as high as the building of the Pyramids, when *Herodotus* delivereth, that so many Talents were spent in Onions and Garlick, for the Food of Labourers and Artificers; and is also answerable unto their present plentifull Diet in Cucumbers, and the great varieties thereof, as testified by *Prosper Alpinus*, who spent many years in *Ægypt*.

Forbidden Fruit. Gen. 2. 17. &c.

13. What Fruit that was which our first Parents tasted in Paradise, from the disputes of learned Men seems yet indeterminable. More clear it is that they cover'd their nakedness or secret parts with Figg Leaves; which when I read, I cannot but call to mind the several considerations which Antiquity had of the Figg Tree, in reference unto those parts, particularly how Figg Leaves by sundry Authours are described to have some resemblance unto the Genitals, and so were aptly formed for such contection of those parts; how also in that famous Statua of *Praxiteles*, concerning *Alexander* and *Bucephalus*, the Secret Parts are veil'd with Figg Leaves; how this Tree was sacred unto *Priapus*, and how the Diseases of the Secret Parts have derived their Name from Figgs.

Balsam Oil. Luke 10. 34.

14. That the good Samaritan coming from *Jericho* used any of the Judean Balsam upon the wounded Traveller, is not to be made out, and we are unwilling to disparage his charitable Surgery in pouring Oil into a green Wound; and therefore when 'tis said he used Oil and Wine, may rather conceive that he made an *Oinelæum* or medicine of Oil and Wine beaten up and mixed together, which was no improper Medicine, and is an Art now lately studied by some so to incorporate Wine and Oil that they may lastingly hold together, which some pretend to have, and call it *Oleum Samaritanum*, or Samaritans Oil.

Pulse of Daniel. Dan. 1. 12.

15. When *Daniel* would not pollute himself with the Diet of the Babylonions, he probably declined Pagan commensation, or to eat of Meats forbidden to the Jews, though common at their Tables, or so much as to taste of their Gentile Immolations, and Sacrifices abominable unto his Palate.

But when 'tis said that he made choice of the Diet of Pulse and Water,

whether he strictly confined unto a leguminous Food, according to the Vulgar Translation, some doubt may be raised, from the original word *Zeragnim*, which signifies *Seminalia*, and is so set down in the Margin of *Arias Montanus*; and the Greek word *Spermata*, generally expressing Seeds, may signifie any edulious or cerealious Grains besides ὄσπρια or leguminous Seeds.

Yet if he strictly made choice of a leguminous Food, and Water instead of his portion from the King's Table, he handsomly declined the Diet which might have been put upon him, and particularly that which was called the *Potibasis* of the King, which as *Athenæus* informeth implied the Bread of the King, made of Barley, and Wheat, and the Wine of *Cyprus*, which he drank in an oval Cup. And therefore distinctly from that he chose plain Fare of Water, and the gross Diet of Pulse, and that perhaps not made into Bread, but parched, and tempered with Water.

Now that herein (beside the special benediction of God) he made choice of no improper Diet to keep himself fair and plump and so to excuse the Eunuch his Keeper, Physicians will not deny, who acknowledge a very nutritive and impinguating faculty in Pulses, in leguminous Food, and in several sorts of Grains and Corns, is not like to be doubted by such who consider that this was probably a great part of the Food of our Forefathers before the Floud, the Diet also of *Jacob*: and that the Romans (called therefore *Pultifagi*) fed much on Pulse for six hundred years; that they had no Bakers for that time: and their Pistours were such as, before the use of Mills, beat out and cleansed their Corn. As also that the Athletick Diet was of Pulse, *Alphiton*, *Maza*, Barley and Water; whereby they were advantaged sometimes to an exquisite state of health, and such as was not without danger. And therefore though *Daniel* were no Eunuch; and of a more fatning and thriving temper, as some have phansied, yet was he by this kind of Diet, sufficiently maintained in a fair and carnous state of Body, and accordingly his Picture not improperly drawn, that is, not meagre and lean, like *Jeremy*'s, but plump and fair, answerable to the most authentick draught of the *Vatican*, and the late German *Luther*'s Bible.

The Cynicks in *Athenæus* make iterated Courses of Lentils, and prefer that Diet before the luxury of *Seleucus*. The present Ægyptians, who are observed by *Alpinus* to be the fattest Nation, and Men to have Breasts like Women, owe much, as he conceiveth, unto the Water of *Nile*, and their Diet of Rice, Pease, Lentils and white Cicers. The Pulse-eating Cynicks and Stoicks, are all very long livers in *Laërtius*. And *Daniel* must not be accounted of few years, who, being carried away Captive in the Reign of *Jechim*, by King *Nebuchadnezzar*, lived by Scripture account, unto the first year of *Cyrus*.

Jacob's *Rods*. Gen. 30. 31.

16. *And Jacob took Rods of green Poplar, and of the Hazel and the Chesnut Tree, and pilled white streaks in them, and made the white appear which was in the Rods*, &c. Men multiply the Philosophy of *Jacob*, who, beside the benediction of God, and the powerfull effects of imagination, raised in the Goats and Sheep from pilled and party-coloured objects, conceive that he chose out these particular Plants above any other, because he understood they had a particular virtue unto the intended effects, according unto the conception of * *Georgius Venetus*.

* G. Venetus *Problem.* 200.

Whereto you will hardly assent, at least till you be better satisfied and assured concerning the true species of the Plants intended in the Text, or find a clearer consent and uniformity in the Translation: For what we render Poplar, Hazel and Chesnut, the Greek translateth *Virgam styracinam, nucinam, plataninam*, which some also render a Pomegranate: and so observing this variety of interpretations concerning common and known Plants among us, you may more reasonably doubt, with what propriety or assurance others less known be sometimes rendred unto us.

Lilies of the Field. Matt. 6. 28.

17. Whether in the Sermon of the Mount, the *Lilies of the Field* did point at the proper Lilies, or whether those Flowers grew wild in the place where our Saviour preached, some doubt may be made: because κρίνον the word

in

in that place is accounted of the same signification with Λείριον, and that in *Homer* is taken for all manner of specious Flowers: so received by *Eustachius*, *Hesychius*, and the Scholiast upon *Apollonius Rhodius*, Καθόλου τὰ ἄνθη Λείρια λέγεται. And Κρίνον is also received in the same latitude, not signifying only Lilies, but applied unto Daffodils, Hyacinths, Iris's, and the Flowers of *Colocynthis*.

Under the like latitude of acception, are many expressions in the *Canticles* to be received. And when it is said *he feedeth among the Lilies*, therein may be also implied other specious Flowers, not excluding the proper Lilies. But in that expression, *the Lilies drop forth Myrrhe*, neither proper Lilies nor proper Myrrhe can be apprehended, the one not proceeding from the other, but may be received in a Metaphorical sense: and in some latitude may be also made out from the roscid and honey drops observable in the Flowers of Martagon, and inverted flowered Lilies, and, 'tis like, is the standing sweet Dew on the white eyes of the Crown Imperial, now common among us.

And the proper Lily may be intended in that expression of 1 *Kings* 7. that the brazen Sea was of the thickness of a hand breadth, and the brim like a Lily. For the figure of that Flower being round at the bottom, and somewhat repandous, or inverted at the top, doth handsomely illustrate the comparison.

But that the Lily of the Valley, mention'd in the *Canticles*, *I am the Rose of Sharon, and the Lily of the Valleys*, is that Vegetable which passeth under the same name with us, that is *Lilium convallium*, or the *May* Lily, you will more hardly believe, who know with what insatisfaction the most learned Botanists, reduce that Plant unto any described by the Ancients; that *Anguillara* will have it to be the *Oenanthe* of *Athenaeus*, *Cordus* the *Pothos* of *Theophrastus*; and *Lobelius* that the Greeks had not described it; who find not six Leaves in the Flower agreeably to all Lilies, but only six small divisions in the Flower, who find it also to have a single, and no bulbous Root, nor Leaves shooting about the bottom, nor the Stalk round, but angular. And that the learned *Bauhinus* hath not placed it in the Classis of Lilies, but nervifolious Plants. Cant. 2.

18. *Doth he not cast abroad the Fitches, and scatter the Cummin Seed, and cast in the principal Wheat, and the appointed Barley, and the Rye in their place:* Herein though the sense may hold under the names assigned, yet is it not so easie to determine the particular Seeds and Grains, where the obscure original causeth such differing Translations. For in the Vulgar we meet with *Milium* and Gith, which our Translation declineth, placing Fitches for Gith, and Rye for *Milium* or Millet, which notwithstanding is retained by the Dutch. *Fitches, Cummin, &c. in Isa. 28. 25.*

That it might be *Melanthium*, *Nigella*, or Gith, may be allowably apprehended, from the frequent use of the Seed thereof among the Jews and other Nations, as also from the Translation of *Tremellius*; and the Original implying a black Seed, which is less than Cummin, as, out of *Aben Ezra*, *Buxtorfius* hath expounded it.

But whereas *Milium* or Κέγχρος of the Septuagint is by ours rendred Rye, there is little similitude or affinity between those Grains; For *Milium* is more agreeable unto *Spelta* or Espaut, as the Dutch and others still render it.

That we meet so often with Cummin Seed in many parts of Scripture in reference unto *Judaea*, a Seed so abominable at present unto our Palates and Nostrils, will not seem strange unto any who consider the frequent use thereof among the Ancients, not only in medical but dietetical use and practice: For their Dishes were filled therewith, and the noblest festival preparations in *Apicius* were not without it: And even in the *Polenta*, and parched Corn, the old Diet of the Romans, (as *Pliny* recordeth) unto every Measure they mixed a small proportion of Lin-seed and Cummin-seed.

And so Cummin is justly set down among things of vulgar and common use, when it is said in *Matthew* 23. v. 23. *You pay Tithe of Mint, Annise and Cummin:*

Cummin: but how to make out the translation of Anniſe we are ſtill to ſeek, there being no word in that Text which properly ſignifieth Anniſe: the Original being Ἄνηθον, which the Latins call *Anethum*, and is properly engliſhed Dill.

That among many expreſſions, alluſions and illuſtrations made in Scripture from Corns, there is no mention made of Oats, ſo uſefull a grain among us, will not ſeem very ſtrange unto you, till you can clearly diſcover that it was a Grain of ordinary uſe in thoſe parts; who may alſo find that *Theophraſtus*, who is large about other Grains, delivers very little of it. That *Dioſcorides* is alſo very ſhort therein. And *Galen* delivers that it was of ſome uſe in *Aſia minor*, eſpecially in *Myſia*, and that rather for Beaſts than Men: And *Pliny* affirmeth that the *Pulticula* thereof was moſt in uſe among the Germans. Yet that the Jews were not without all uſe of this Grain ſeems confirmable from the Rabbinical account, who reckon five Grains liable unto their Offerings, whereof the Cake preſented might be made; that is, Wheat, Oats, Rye, and two ſorts of Barley.

Ears of Corn. Matt. 12. 1.

19. Why the Diſciples being hungry pluck'd the Ears of Corn, it ſeems ſtrange to us, who obſerve that Men half ſtarved betake not themſelves to ſuch ſupply; except we conſider the ancient Diet of *Alphiton* and *Polenta*, the Meal of dried and parched Corn, or that which was Ἀμύλυσις, or Meal of crude and unparched Corn, wherewith they being well acquainted, might hope for ſome ſatisfaction from the Corn yet in the Husk; that is, from the nouriſhing pulp or mealy part within it.

Stubble of Ægypt. Exod. 5. 7, &c.

20. The inhumane oppreſſion of the Ægyptian Task-maſters, who, not content with the common tale of Brick, took alſo from the Children of Iſrael their allowance of *Straw*, and forced them to gather *Stubble* where they could find it, will be more nearly apprehended, if we conſider how hard it was to acquire any quantity of Stubble in *Ægypt*, where the Stalk of Corn was ſo ſhort, that to acquire an ordinary meaſure, it required more than ordinary labour; as is diſcoverable from that account, which * *Pliny* hath happily left unto us. In the Corn gather'd in *Ægypt* the Straw is never a Cubit long: becauſe the Seed lieth very ſhallow, and hath no other nouriſhment than from the Mudd and Slime left by the River; For under it is nothing but Sand and Gravel.

* *Lib.* 18. *Nat. Hiſt.*

So that the expreſſion of Scripture is more Emphatical than is commonly apprehended, when 'tis ſaid, *The people were ſcattered abroad through all the Land of Ægypt to gather Stubble inſtead of Straw.* For the Stubble being very ſhort, the acquiſt was difficult; a few Fields afforded it not, and they were fain to wander far to obtain a ſufficient quantity of it.

Flowers of the Vine. Cant. 2. 13.

21. It is ſaid in the *Song of Solomon*, that *the Vines with the tender Grape give a good ſmell.* That the Flowers of the Vine ſhould be Emphatically noted to give a pleaſant ſmell ſeems hard unto our Northern Noſtrils, which diſcover not ſuch Odours, and ſmell them not in full Vineyards; whereas in hot Regions, and more ſpread and digeſted Flowers, a ſweet ſavour may be allowed, denotable from ſeveral humane expreſſions, and the practice of the Ancients, in putting the dried Flowers of the Vine into new Wine to give it a pure and floſculous race or ſpirit, which Wine was therefore called Οἰνάνθινον, allowing unto every *Cadus* two pounds of dried Flowers.

And therefore, the Vine flowering but in the Spring, it cannot but ſeem an impertinent objection of the Jews, that the Apoſtles were *full of new Wine* at *Pentecoſt* when it was not to be found. Wherefore we may rather conceive that the word * Γλεύκω in that place implied not *new Wine* or *Muſt*, but ſome generous ſtrong and ſweet Wine, wherein more eſpecially lay the power of inebriation.

* Acts 2. 13.

But if it be to be taken for ſome kind of *Muſt*, it might be ſome kind of Ἀειγλεύκῳ or long-laſting *Muſt*, which might be had at any time of the year, and which as *Pliny* delivereth, they made by hindering, and keeping the *Muſt* from fermentation or working, and ſo it kept ſoft and ſweet for no ſmall time after.

22. When

22. When the *Dove*, sent out of the Ark, return'd with *a green Olive Leaf*, according to the Original: how the Leaf, after ten Months, and under water, should still maintain a verdure or greenness, need not much amuse the Reader, if we consider that the Olive Tree is Ἀείφυλλον, or continually green; that the Leaves are of a bitter taste, and of a fast and lasting substance. Since we also find fresh and green Leaves among the Olives which we receive from remote Countries; and since the Plants at the bottom of the Sea, and on the sides of Rocks, maintain a deep and fresh verdure. *The Olive Leaf in* Gen. 8. 11.

How the Tree should stand so long in the Deluge under Water, may partly be allowed from the uncertain determination of the Flows and Currents of that time, and the qualification of the saltness of the Sea, by the admixture of fresh Water, when the whole watery Element was together.

And it may be signally illustrated from the like examples in * *Theophrastus* and † *Pliny* in words to this effect: Even the Sea affordeth Shrubs and Trees; In the red Sea whole Woods do live, namely of Bays and Olives bearing Fruit. The Souldiers of *Alexander*, who sailed into *India*, made report, that the Tides were so high in some Islands, that they overflowed, and covered the Woods, as high as Plane and Poplar Trees. The lower sort wholly, the greater all but the tops, whereto the Mariners fastned their Vessels at high Waters, and at the root in the Ebb; That the Leaves of these Sea Trees while under water looked green, but taken out presently dried with the heat of the Sun. The like is delivered by *Theophrastus*, that some Oaks do grow and bear Acorns under the Sea. * Theophrast. *Hist. Lib.* 4. *Cap.* 7, 8. † Plin. *lib.* 13. *cap. ultimo.*

23. *The Kingdom of Heaven is like to a grain of Mustard-seed, which a Man took and sowed in his Field, which indeed is the least of all Seeds; but when 'tis grown is the greatest among Herbs, and becometh a Tree, so that the Birds of the Air come and lodge in the Branches thereof.* *Grain of Mustard-seed in S.* Matt. 13. 31, 32.

Luke 13. 19. *It is like a grain of Mustard-seed, which a Man took and cast it into his Garden, and it waxed a great Tree, and the Fowls of the Air lodged in the Branches thereof.*

This expression by a grain of Mustard-seed, will not seem so strange unto you, who well consider it. That it is simply the least of Seeds, you cannot apprehend, if you have beheld the Seeds of *Rapunculus*, Marjorane, Tabaco, and the smallest Seed of *Lunaria*.

But you may well understand it to be the smallest Seed among Herbs which produce so big a Plant, or the least of herbal Plants, which arise unto such a proportion, implied in the expression; *the smallest of Seeds*, and *becometh the greatest of Herbs*.

And you may also grant that it is the smallest of Seeds of Plants apt to δενδρίζειν *arborescere*, *fruticescere*, or to grow unto a ligneous substance, and from an herby and oleraceous Vegetable, to become a kind of Tree, and to be accounted among the *Dendrolachana*, or *Arboroleracea*; as upon strong Seed, Culture and good Ground, is observable in some Cabbages, Mallows, and many more, and therefore expressed by γίνεται τὸ δένδρον and γίνεται εἰς τὸ δένδρον, it becometh a Tree, or *arborescit*, as *Beza* rendreth it.

Nor if warily considered doth the expression contain such difficulty. For the Parable may not ground it self upon generals, or imply any or every grain of Mustard, but point at such a grain as from its fertile Spirit, and other concurrent advantages, hath the success to become arboreous, shoot into such a magnitude, and acquire the like tallness. And unto such a Grain the Kingdom of Heaven is likened which from such slender beginnings shall find such increase and grandeur.

The expression also that it might grow into such dimensions that Birds might lodge in the Branches thereof, may be literally conceived; if we allow the luxuriancy of Plants in *Judæa*, above our Northern Regions; If we accept of but half the Story taken notice of by *Tremellius*, from the *Jerusalem Talmud*, of a Mustard Tree that was to be climbed like a Figg Tree; and of another, under whose shade a Potter daily wrought: and it may somewhat abate our doubts, if we take in the advertisement of *Herodotus*

dotus concerning lesser Plants of *Milium* and *Sesamum* in the Babylonian Soil: *Milium ac Sesamum in proceritatem instar arborum crescere, etsi mihi compertum, tamen memorare supersedeo, probè sciens eis qui nunquam Babyloniam regionem adierunt perquam incredibile visum iri.* We may likewise consider that the word κατασκηνῶσαι doth not necessarily signifie *making a Nest*, but rather sitting, roosting, covering and resting in the Boughs, according as the same word is used by the *Septuagint* in other places * as the Vulgar rendreth it in this, *inhabitant*, as our Translation, *lodgeth*, and the Rhemish, *resteth* in the Branches.

* Dan. 4. 9. Psal. 1. 14. 12.

The Rod of Aaron. Numb. 17. 8.

24. *And it came to pass that on the morrow Moses went into the Tabernacle of witness, and behold the Rod of Aaron for the House of Levi was budded, and brought forth Buds, and bloomed Blossomes, and yielded Almonds.* In the contention of the Tribes and decision of priority and primogeniture of *Aaron*, declared by the Rod, which in a night budded, flowred and brought forth Almonds, you cannot but apprehend a propriety in the Miracle from that species of Tree which leadeth in the Vernal germination of the year, unto all the Classes of Trees; and so apprehend how properly in a night and short space of time the Miracle arose, and somewhat answerable unto its nature the Flowers and Fruit appeared in this precocious Tree, and whose original Name * implies such speedy efflorescence, as in its proper nature flowering in *February*, and shewing its Fruit in *March*.

* Shacher *from* Shachar festinus fuit *or* maturuit.

This consideration of that Tree maketh the expression in *Jeremy* more Emphatical, when 'tis said †, *What seest thou? and he said, A Rod of an Almond Tree. Then said the Lord unto me, Thou hast well seen, for I will hasten the Word to perform it.* I will be quick and forward like the Almond Tree, to produce the effects of my word, and hasten to display my judgments upon them.

† Jer. 1. 11.

Eccles. 12. 5.

And we may hereby more easily apprehend the expression in *Ecclesiastes*; *When the Almond Tree shall flourish*, That is when the Head, which is the prime part, and first sheweth it self in the World, shall grow white, like the Flowers of the Almond Tree, whose Fruit, as *Athenæus* delivereth, was first called Κάρυον, or the Head, from some resemblance and covering parts of it.

How properly the priority was confirmed by a Rod or Staff, and why the Rods and Staffs of the Princes were chosen for this decision, Philologists will consider. For these were the badges, signs and cognisances of their places, and were a kind of Sceptre in their Hands, denoting their supereminencies. The Staff of Divinity is ordinarily described in the Hands of Gods and Goddesses in old draughts. Trojan and Grecian Princes were not without the like, whereof the Shoulders of *Thersites* felt from the Hands of *Ulysses*. *Achilles* in *Homer*, as by a desperate Oath, swears by his wooden Sceptre, which should never bud nor bear Leaves again; which seeming the greatest impossibility to him, advanceth the Miracle of *Aaron*'s Rod. And if it could be well made out that *Homer* had seen the Books of *Moses*, in that expression of *Achilles*, he might allude unto this Miracle.

That power which proposed the experiment by Blossomes in the Rod, added also the Fruit of Almonds; the Text not strictly making out the Leaves, and so omitting the middle germination: the Leaves properly coming after the Flowers, and before the Almonds. And therefore if you have well perused Medals, you cannot but observe how in the impress of many Shekels, which pass among us by the name of the *Jerusalem* Shekels, the Rod of *Aaron* is improperly laden with many Leaves, whereas that which is shewn under the name of the Samaritan Shekel seems most conformable unto the Text, which describeth the Fruit without Leaves.

The Vine in Gen. 49. 11.

25. *Binding his Foal unto the Vine, and his Asses Colt unto the choice Vine.* That Vines, which are commonly supported, should grow so large and bulky, as to be fit to fasten their Juments, and Beasts of labour unto them, may seem a hard expression unto many: which notwithstanding may easily be admitted, if we consider the account of *Pliny*, that in many places out of *Italy* Vines do grow without any stay or support: nor will it be otherwise

wise conceived of lusty Vines, if we call to mind how the same * Authour delivereth, that the *Statua* of *Jupiter* was made out of a Vine; and that out of one single Cyprian Vine a Scale or Ladder was made that reached unto the Roof of the Temple of *Diana* at *Ephesus*.

* Plin. *lib.* 14.

26. *I was exalted as a Palm-Tree in Engaddi, and as a Rose-Plant in Jericho.* That the Rose of *Jericho*, or that Plant which passeth among us under that denomination, was signified in this Text, you are not like to apprehend with some, who also name it the *Rose of S. Mary*, and deliver, that it openeth the branches, and flowers upon the Eve of our Saviour's Nativity: But rather conceive it some proper kind of Rose, which thrived and prospered in *Jericho* more than in the neighbour Countries. For our Rose of *Jericho* is a very low and hard Plant, a few inches above the ground; one whereof brought from *Judæa* I have kept by me many years, nothing resembling a Rose-Tree, either in Flowers, Branches, Leaves or Growth; and so improper to answer the Emphatical word of exaltation in the Text: growing not only about *Jericho*, but other parts of *Judæa* and *Arabia*, as *Bellonius* hath observed: which being a dry and ligneous Plant, is preserved many years, and though crumpled and furdled up, yet, if infused in Water, will swell and display its parts.

Rose of Jericho. Ecclus. 24. 14.

27. *Quasi Terebinthus extendi ramos*, when it is said in the same Chapter, *as a Turpentine-Tree have I stretched out my Branches*: it will not seem strange unto such as have either seen that Tree, or examined its description: For it is a Plant that widely displayeth its Branches: And though in some *European* Countries it be but of a low and fruticeous growth, yet *Pliny* * observeth that it is great in *Syria*, and so allowably, or at least not improperly mentioned in the expression of † *Hosea* according to the Vulgar Translation: *Super capita montium sacrificant*, &c. *sub quercu, populo & terebintho, quoniam bona est umbra ejus.* And this diffusion and spreading of its Branches, hath afforded the Proverb of *Terebintho stultior*, appliable unto arrogant or boasting persons, who spread and display their own acts, as *Erasmus* hath observed.

Turpentine Tree in Eccl. 24. 16.

* Terebinthus in Macedonia fruticat, in Syria, magna est. *Lib.* 13. Plin.

† Hos. 4. 13.

28. It is said in our Translation. *Saul tarried in the uppermost parts of Gibeah, under a Pomegranate Tree which is in Migron: and the people which were with him were about six hundred men.* And when it is said in some *Latin* Translations, *Saul morabatur fixo tentorio sub Malogranato*, you will not be ready to take it in the common literal sense, who know that a Pomegranate-Tree is but low of growth, and very unfit to pitch a Tent under it; and may rather apprehend it as the name of a place, or the Rock of *Rimmon*, or Pomegranate; so named from Pomegranates which grew there, and which many think to have been the same place mentioned in * *Judges*.

Pomegranate in 1 Sam. 14. 2.

* Judges 20. 45. 47. *Ch.* 21. 13.

29. It is said in the Book of *Wisdom*, *Where water stood before, dry land appeared, and out of the Red-Sea a way appeared without impediment, and out of the violent streams a green Field*; or as the *Latin* renders it, *Campus germinans de profundo*: whereby it seems implied that the *Israelites* passed over a green Field at the bottom of the Sea: and though most would have this but a Metaphorical expression, yet may it be literally tolerable; and so may be safely apprehended by those that sensibly know what great number of Vegetables (as the several varieties of *Alga's*, *Sea-Lettuce*, *Phasganium*, *Conferva*, *Caulis Marina*, *Abies*, *Erica*, *Tamarice*, divers sorts of *Muscus*, *Fucus*, *Quercus*, *Marina* and *Corallins*) are found at the bottom of the Sea. Since it is also now well known, that the Western Ocean, for many degrees, is covered with *Sargasso* or *Lenticula Marina*, and found to arise from the bottom of that Sea; since, upon the coast of *Provence* by the Isles of *Eres*, there is a part of the *Mediterranean Sea*, called *la Prairie*, or the *Meadowy Sea*, from the bottom thereof so plentifully covered with Plants: since vast heaps of Weeds are found in the Bellies of some Whales taken in the Northern Ocean, and at a great distance from the Shore: And since the providence of Nature hath povided this shelter for minor Fishes; both for their spawn, and safety of their young ones. And this might be more peculiarly allowed to be spoken of the Red-Sea, since the *Hebrews* named it *Suph*, or the *Weedy Sea*: and, also, seeing *Theophrastus* and *Pliny*, observing the growth of Vegetables under wa-

A green Field in Wisd. 19. 7

ter, have made their chief illustrations from those in the Red-Sea.

Sycamore. 30. You will readily discover how widely they are mistaken, who accept the Sycamore mention'd in several parts of Scripture for the Sycamore, or Tree of that denomination, with us: which is properly but one kind or difference of *Acer*, and bears no Fruit with any resemblance unto a Figg.

But you will rather, thereby, apprehend the true and genuine Sycamore, or *Sycaminus*, which is a stranger in our parts. A Tree (according to the description of *Theophrastus*, *Dioscorides* and *Galen*) resembling a Mulberry-Tree in the Leaf, but in the Fruit a Figg; which it produceth not in the Twiggs but in the Trunck or greater Branches, answerable to the Sycamore of *Egypt*, the *Egyptian* Figg or Giamez of the *Arabians*, described by *Prosper Alpinus*, with a Leaf somewhat broader than a Mulberry, and in its Fruit like a Figg. Insomuch that some have fancied it to have had its first production from a Figg-Tree grafted on a Mulberry.

It is a Tree common in *Judæa*, whereof they made frequent use in Buildings; and so understood, it explaineth that expression in * *Isaiah*: *Sycamori excisi sunt, Cedros substituemus. The Bricks are fallen down, we will build with hewen Stones: The Sycamores are cut down, but we will change them into Cedars.*

* Isa. 9. 10.

It is a broad spreading Tree, not only fit for Walks, Groves and Shade, but also affording profit. And therefore it is said that King † *David* appointed *Baalhanan* to be over his Olive-Trees and Sycamores, which were in great plenty; and it is accordingly delivered, ‖ that *Solomon made Cedars to be as the Sycamore-Trees that are in the Vale for abundance.* That is, he planted many, though they did not come to perfection in his days.

† 1 Chron. 27. 28.
‖ 1 King. 10. 27.

And as it grew plentifully about the Plains, so was the Fruit good for Food; and, as *Bellonius* and late accounts deliver, very refreshing unto Travellers in those hot and dry Countries: whereby the expression of * *Amos* becomes more intelligible, when he said he was *an Herdsman, and a gatherer of Sycamore-Fruit.* And the expression of † *David* also becomes more Emphatical; *He destroyed their Vines with Hail, and their Sycamore-Trees with Frost.* That is, their *Sicmoth* in the Original, a word in the sound not far from the Sycamore.

* Amos 7. 14.
† Psal. 78. 47.

Thus when it is said, ‖ *If ye had Faith as a grain of Mustard-seed, ye might say unto this Sycamine-Tree, Be thou plucked up by the roots, and be thou placed in the Sea, and it should obey you:* it might be more significantly spoken of this Sycamore; this being described to be *Arbor vasta*, a large and well-rooted Tree, whose removal was more difficult than many others. And so the instance in that Text, is very properly made in the Sycamore-Tree, one of the largest and less removable Trees among them. A Tree so lasting and well rooted, that the Sycamore which *Zacheus* ascended, is still shewn in *Judæa* unto Travellers; as also the hollow Sycamore at *Maturæa* in *Egypt*, where the blessed Virgin is said to have remained: which though it relisheth of the Legend, yet it plainly declareth what opinion they had of the lasting condition of that Tree, to countenance the Tradition; for which they might not be without some experience, since the learned describer of the * *Pyramides* observeth, that the old *Egyptians* made Coffins of this Wood, which he found yet fresh and undecayed among divers of their Mummies.

‖ Luk. 17. 6.

* D. Greaves.

And thus, also, when *Zacheus* climbed up into a Sycamore above any other Tree, this being a large and fair one, it cannot be denied that he made choice of a proper and advantageous Tree to look down upon our Saviour.

Increase of Seed 100 fold, in Matt. 13. 23.

31. Whether the expression of our Saviour in the Parable of the Sower, and the increase of the Seed *unto thirty, sixty and a hundred fold*, had any reference unto the ages of Believers, and measures of their Faith, as Children, Young and Old Persons, as to beginners, well advanced and strongly confirmed Christians, as learned men have hinted; or whether in this progressional assent there were any latent Mysteries, as the mystical Interpreters of Numbers may apprehend, I pretend not to determine.

But, how this multiplication may well be conceived, and in what way apprehended, and that this centesimal increase is not naturally strange, you that are no stranger in Agriculture, old and new, are not like to make great doubt.

That

That every Grain ſhould produce an Ear affording an hundred Grains, is not like to be their conjecture who behold the growth of Corn in our Fields, wherein a common Grain doth produce far leſs in number. For Barley conſiſting but of two *Verſus* or Rows, ſeldom exceedeth twenty Grains, that is, ten upon each στίχος, or Row; Rye, of a ſquare figure, is very fruitful at forty: Wheat, beſides the *Frit* and *Uruncus*, or imperfect Grains of the ſmall Husks at the top and bottom of the Ear, is fruitful at ten treble *Glumæ* or Husks in a Row, each containing but three Grains in breadth, if the middle Grain arriveth at all to perfection; and ſo maketh up threeſcore Grains in both ſides.

Yet even this centeſimal fructification may be admitted in ſome ſorts of *Cerealia*, and Grains from one Ear: if we take in the *Triticum centigranum*, or *fertiliſſimum Plinii*, Indian Wheat, and *Panicum*; which, in every Ear, containeth hundreds of Grains.

But this increaſe may eaſily be conceived of Grains in their total multiplication, in good and fertile ground, ſince, if every Grain of Wheat produceth but three Ears, the increaſe will ariſe above that number. Nor are we without examples of ſome grounds which have produced many more Ears, and above this centeſimal increaſe: As *Pliny* hath left recorded of the *Byzacian* Field in *Africa*. *Miſit ex eo loco Procurator ex uno quadraginta minus germina. Miſit & Neroni pariter tercentum quadraginta ſtipulos, ex uno grano. Cum centeſimos quidem Leontini Siciliæ campi fundunt, aliique, & tota Bætica, & imprimis Ægyptus.* And even in our own Country, from one Grain of Wheat ſowed in a Garden, I have numbred many more than an hundred.

And though many Grains are commonly loſt which come not to ſprouting or earing, yet the ſame is alſo verified in meaſure; as that one Buſhel ſhould produce a hundred, as is exemplied by the Corn in *Gerar*; * *Then Iſaac ſowed in that Land, and received in that year an hundred fold.* That is, as the *Chaldee* explaineth it, *a hundred for one*, when he meaſured it. And this *Pliny* ſeems to intend, when he ſaith of the fertile *Byzacian* Territory before mentioned, *Ex uno centeni quinquaginta modii redduntur.* And may be favourably apprehended of the fertility of ſome grounds in *Poland*; wherein, after the account of *Gaguinus*, from Rye ſowed in *Auguſt*, come thirty or forty Ears, and a Man on Horſeback can ſcarce look over it. In the Sabbatical Crop of *Judæa*, there muſt be admitted a large increaſe, and probably not ſhort of this centeſimal multiplication: For it ſupplied part of the ſixth year, the whole ſeventh, and eighth until the Harveſt of that year.

* Gen. 26. 12.

The *ſeven years of plenty in Egypt* muſt be of high increaſe; when, by ſtoring up but the fifth part, they ſupplied the whole Land, and many of their neighbours after: for it is ſaid, * the Famine was in all the Land about them. And therefore though the cauſes of the Dearth in *Egypt* be made out from the defect of the overflow of *Nilus*, according to the Dream of *Pharaoh*; yet was that no cauſe of the ſcarcity in the Land of *Canaan*, which may rather be aſcribed to the want of the former and latter rains, for ſome ſucceeding years, if their Famine held time and duration with that of *Egypt*; as may be probably gather'd from that expreſſion of *Joſeph*, † *Come down unto me* [*into Egypt*] *and tarry not, and there will I nouriſh you: (for yet there are five years of Famine) leſt thou and thy Houſhold, and all that thou haſt come to poverty.*

* Gen. 41. 56.

† Gen. 45. 9, 11.

How they preſerved their Corn ſo long in *Egypt* may ſeem hard unto Northern and moiſt Climates, except we conſider the many ways of preſervation practiſed by antiquity, and alſo take in that handſome account of *Pliny*; What Corn ſo ever is laid up in the Ear, it taketh no harm keep it as long as you will, although the beſt and moſt aſſured way to keep Corn is in Caves and Vaults under ground, according to the practice of *Cappadocia* and *Thracia*.

In *Egypt* and *Mauritania* above all things they look to this, that their Granaries ſtand on high ground; and how dry ſo ever their Floor be, they lay a courſe of Chaff betwixt it and the ground. Beſides, they put up their Corn in Granaries and Binns together with the Ear. And *Varro* delivereth

that Wheat laid up in that manner will last fifty years; Millet an hundred; and Beans so conserved in a Cave of *Ambracia*, were known to last an hundred and twenty years; that is, from the time of King *Pyrrhus*, unto the Pyratick War under the Conduct of *Pompey*.

More strange it may seem how, after seven years, the Grains conserved should be fruitful for a new production. For it is said that *Joseph delivered Seed unto the Ægyptians, to sow their Land for the eighth year*: and Corn after seven years is like to afford little or no production, according to *Theophrastus*; * *Ad Sementem semen anniculum optimum putatur, binum deterius & trinum ultra sterile fermè est, quanquam ad usum cibarium idoneum.*

* Theoph. *Hist. l.* 8.

Yet since, from former exemplifications, Corn may be made to last so long, the fructifying power may well be conceived to last in some good proportion, according to the region and place of its conservation, as the same *Theophrastus* hath observed, and left a notable example from *Cappadocia*, where Corn might be kept sixty years, and remain fertile at forty; according to his expression thus translated; *In Cappadociâ loco quodam petra dicto, triticum ad quadraginta annos fœcundum est, & ad sementem percommodum durare proditum est, sexagenos aut septuagenos ad usum cibarium servari posse idoneum.* The situation of that Conservatory, was, as he delivereth, ὑψηλὸν, εὔπνευ, εὔαερον, *high, airy and exposed to several favourable winds.* And upon such consideration of winds and ventilation, some conceive the Ægyptian Granaries were made open, the Country being free from rain. Howsoever it was, that contrivance could not be without some hazard: * for the great Mists and Dews of that Country might dispose the Corn unto corruption.

* Ægypt ὁμιχλώδης, καὶ δροσώδης. *Vid.* Theophrastum.

More plainly may they mistake, who from some analogy of name (as if *Pyramid* were derived from πυρὸν, *Triticum*,) conceive the Ægyptian Pyramids to have been built for Granaries; or look for any settled Monuments about the Deserts erected for that intention; since their Store-houses were made in the great Towns, according to Scripture expression, † *He gathered up all the Food of seven years, which was in the Land of Ægypt, and laid up the Food in the Cities: the Food of the Field which was round about every City, laid he up in the same.*

† Gen. 41. 48.

Olive Tree in Rom. 11. 24.

32. *For if thou wert cut out of the Olive Tree, which is wild by nature, and wert grafted, contrary to nature, into a good Olive Tree, how much more shall these which be the natural Branches, be grafted into their own Olive Tree?* In which place, how answerable to the doctrine of Husbandry this expression of S. *Paul* is, you will readily apprehend who understand the rules of insition or grafting, and that way of vegetable propagation; wherein that is contrary to nature, or natural rules which Art observeth: *viz.* to make use of Cyons more ignoble than the Stock, or to graft wild upon domestick and good Plants, according as * *Theophrastus* hath anciently observed, and, making instance in the Olive, hath left this Doctrine unto us; *Urbanum Sylvestribus ut satis Oleastris inserere. Nam si è contrario Sylvestrem in Urbanos severis, etsi differentia quædam erit, tamen* † *bonæ frugis Arbor nunquam profecto reddetur*: which is also agreeable unto our present practice, who graft Pears on Thorns, and Apples upon Crabb Stocks, not using the contrary insition. And when it is said, *How much more shall these, which are the natural Branches, be grafted into their own natural olive Tree?* this is also agreeable unto the rule of the same Authour; Ἐστ ὃ βελτίων ἐγκεντρισμὸς, ὁμοίων εἰς ὅμοια, *Insitio melior est similium in similibus*: For the nearer consanguinity there is between the Cyons and the Stock; the readier comprehension is made, and the nobler fructification. According also unto the later caution of *Laurenbergius*; ‖ *Arbores domesticæ insitioni destinatæ, semper anteponendæ Sylvestribus.* And though the success be good, and may suffice upon Stocks of the same denomination; yet, to be grafted upon their own and Mother Stock, is the neerest insition: which way, though less practised of old, is now much imbraced, and found a notable way for melioration of the Fruit, and much the rather, if the Tree to be grafted on be a good and generous Plant, a good and fair Olive, as the Apostle seems to imply by a peculiar * word scarce to be found elsewhere.

* De causis Plant. *Lib.* 1. *Cap.* 7.

† Καλλικαρπεῖν οὐκ ἔξει.

‖ De horticultura.

* Καλλιέλαιον. Rom. 11. 24.

It

It must be also considered, that the *Oleaster*, or wild Olive, by cutting, transplanting and the best managery of Art, can be made but to produce such Olives as (*Theophrastus* saith) were particularly named *Phaulia*, that is, but *bad Olives*; and that it was reckon'd among Prodigies, for the *Oleaster* to become an Olive Tree.

And when insition and grafting, in the Text, is applied unto the Olive Tree, it hath an Emphatical sense, very agreeable unto that Tree which is best propagated this way; not at all by surculation, as *Theophrastus* observeth, nor well by Seed, as hath been observed. *Omne semen simile genus perficit, præter oleam, Oleastrum enim generat, hoc est sylvestrem oleam, & non oleam veram.*

"If, therefore, thou Roman and Gentile Branch, which wert cut from "the wild Olive, art now, by the signal mercy of God, beyond the ordi- "nary and commonly expected way, grafted into the true Olive, the "Church of God; if thou, which neither naturally nor by humane art "canst be made to produce any good Fruit, and, next to a Miracle, to be "made a true Olive, art now by the benignity of God grafted into the "proper Olive; how much more shall the Jew, and natural Branch, be "grafted into its genuine and Mother Tree, wherein propinquity of nature "is like, so readily and prosperously, to effect a coalition? And this more "especially by the expressed way of insition or implantation, the Olive "being not successfully propagable by Seed, nor at all by surculation.

Stork nesting on Firre Trees in Psal. 104. 17.

33. *As for the Stork, the Firre Trees are her House.* This expression, in our Translation, which keeps close to the Original *Chasidah*, is somewhat different from the Greek and Latin Translation; nor agreeable unto common observation, whereby they are known commonly to build upon Chimneys, or the tops of Houses, and high Buildings, which notwithstanding, the common Translation may clearly consist with observation, if we consider that this is commonly affirmed of the black Stork, and take notice of the description of *Ornithologus* in *Aldrovandus*, that such Storks are often found in divers parts, and that they do *in Arboribus nidulari, præsertim in abietibus*; Make their Nests on Trees, especially upon Firre Trees. Nor wholly disagreeing unto the practice of the common white Stork, according unto *Varro, nidulantur in agris*: and the concession of *Aldrovandus* that sometimes they build on Trees: and the assertion of * *Bellonius*, that men dress them nests, and place Cradles upon high trees, in Marish regions, that Storks may breed upon them: which course some observe for Herns and Cormorants with us. And this building of Storks upon Trees, may be also answerable unto the original and natural way of building of Storks before the politicial habitations of men, and the raising of Houses and high Buildings; before they were invited by such conveniences and prepared Nests, to relinquish their natural places of nidulation. I say, before or where such advantages are not ready; when Swallows found other places than Chimneys, and Daws found other places than holes in high Fabricks to build in

* Bellonius *de Avibus.*

Balm, in Gen. 43. 11.

34. *And, therefore, Israel said, carry down the man a present, a little Balm, a little Honey, and Myrrhe, Nuts and Almonds.* Now whether this, which *Jacob* sent, were the proper Balsam extolled by humane Writers, you cannot but make some doubt, who find the Greek Translation to be Ῥητίνη that is, *Resina*, and so may have some suspicion that it might be some pure distillation from the Turpentine Tree; which grows prosperously and plentifully in *Judæa*, and seems so understood by the Arabick; and was indeed esteemed by *Theophrastus* and *Dioscorides*, the chiefest of resinous Bodies, and the word *Resina* Emphatically used for it.

That the Balsam Plant hath grown and prospered in *Judæa* we believe without dispute. For the same is attested by *Theophrastus*, *Pliny*, *Justinus*, and many more; from the commendation that *Galen* affordeth of the Balsam of *Syria*, and the story of *Cleopatra*, that she obtain'd some Plants of Balsam from *Herod* the Great to transplant into *Ægypt*. But whether it was so anciently in *Judæa* as the time of *Jacob*; nay, whether this Plant was here before the time of *Solomon*, that great collectour of Vegetable Rarities, some doubt may be made from the account of *Josephus*, that the

the Queen of *Sheba*, a part of *Arabia*, among Presents unto *Solomon*, brought some Plants of the Balsam Tree, as one of the peculiar estimables of her Country.

Whether this ever had its natural growth, or were an original native Plant of *Judæa*, much more that it was peculiar unto that Country, a greater doubt may arise: while we read in *Pausanias*, *Strabo* and *Diodorus*, that it grows also in *Arabia*, and find in * *Theophrastus*, that it grew in two Gardens about *Jericho* in *Judæa*. And more especially whiles we seriously consider that notable discourse between *Abdella*, *Abdachim* and *Alpinus*, concluding the natural and original place of this singular Plant to be in *Arabia*, about *Mecha* and *Medina*, where it still plentifully groweth, and Mountains abound therein. From whence it hath been carefully transplanted by the *Basha's* of *Grand Cairo*, into the Garden of *Matarea*; where, when it dies, it is repaired again from those parts of *Arabia*, from whence the *Grand Signior* yearly receiveth a Present of Balsam from the *Xeriff* of *Mecha*, still called by the Arabians *Balessan*; whence they believe arose the Greek appellation *Balsam*. And since these Balsam-plants are not now to be found in *Judæa*, and though purposely cultivated, are often lost in *Judæa*, but everlastingly live, and naturally renew in *Arabia*; They probably concluded, that those of *Judæa* were foreign and transplanted from these parts.

* Theophrast. l 9. c. 6.

All which notwithstanding, since the same Plant may grow naturally and spontaneously in several Countries, and either from inward or outward causes be lost in one Region, while it continueth and subsisteth in another, the Balsam Tree might possibly be a native of *Judæa* as well as of *Arabia*, which because *de facto* it cannot be clearly made out, the ancient expressions of Scripture become doubtfull in this point. But since this Plant hath not, for a long time, grown in *Judæa*, and still plentifully prospers in *Arabia*, that which now comes in pretious parcels to us, and still is called the Balsam of *Judæa*, may now surrender its name, and more properly be called the Balsam of *Arabia*.

Barly, Flax, &c. in Exod. 9. 31. * Linum folliculos germinavit, σπερματίζον, *Septuag.* Serotina, Lat. ὄψιμα, Gr.

35. *And the Flax and the Barley was smitten; for the Barley was in the Ear, and the Flax was bolled, but the Wheat and the Rye was not smitten, for they were not grown up.* * How the Barley and the Flax should be smitten in the plague of Hail in *Ægypt*, and the Wheat and Rye escape, because they were not yet grown up, may seem strange unto English observers, who call Barly Summer-Corn sown so many months after Wheat, and beside *hordeum Polystichon*, or big Barley, sow not Barly in the Winter, to anticipate the growth of Wheat.

And the same may also seem a preposterous expression unto all who do not consider the various Agriculture, and different Husbandry of Nations, and such as was practised in *Ægypt*, and fairly proved to have been also used in *Judæa*, wherein their Barley Harvest was before that of Wheat; as is confirmable from that expression in *Ruth*, that she *came into Bethlehem at the beginning of Barley Harvest*, and staid unto the end of Wheat Harvest; from the death of *Manasses* the Father of *Judith*, Emphatically expressed to have happened in the Wheat Harvest, and more advanced heat of the Sun; and from the custom of the Jews, to offer the Barley Sheaf of the First-fruits in *March*, and a Cake of Wheat Flower but at the end of *Pentecost*. Consonant unto the practice of the Ægyptians, who (as *Theophrastus* delivereth) sowed their Barley early in reference to their First-fruits; and also the common rural practice, recorded by the same Authour, *Mature seritur Triticum, Hordeum, quod etiam maturius seritur; Wheat and Barley are sowed early, but Barley earlier of the two.*

Flax was also an early Plant, as may be illustrated from the neighbour Country of *Canaan*. For the Israelites kept the Passeover in *Gilgal* in the fourteenth day of the first Month, answering unto part of our *March*, having newly passed *Jordan*: And the Spies which were sent from *Shittim* nuto *Jericho*, not many days before, were hid by *Rahab* under the stalks of

of Flax, which lay drying on the top of her Houſe; which ſheweth that the Flax was already and newly gathered. For this was the firſt preparation of Flax, and before fluviation or rotting, which, after *Pliny*'s account, was after Wheat-Harveſt.

But the Wheat and the Rye were not ſmitten, for they were not grown up. The Original ſignifies that it was *hidden*, or *dark*, the Vulgar and Septuagint that it was *ſerotinous* or *late*, and our old Tranſlation that it was *late ſown*. And ſo the expreſſion and interpoſition of *Moſes*, who well underſtood the Husbandry of *Ægypt*, might Emphatically declare the ſtate of Wheat and Rye in that particular year; and if ſo, the ſame is ſolvable from the time of the floud of *Nilus*, and the meaſure of its inundation. For if it were very high, and over-drenching the ground, they were forced to later Seed-time; and ſo the Wheat and the Rye eſcaped; for they were more ſlowly growing Grains, and, by reaſon of the greater inundation of the River, were ſown later than ordinary that year, eſpecially in the Plains near the River, where the ground drieth lateſt.

Some think the Plagues of *Ægypt*, were acted in one Month, others but in the compaſs of twelve. In the delivery of Scripture there is no account, of what time of the year or particular Month they fell out; but the account of theſe Grains, which were either ſmitten or eſcaped, make the plague of Hail to have probably hapned in *February*: This may be collected from the new and old account of the Seed time and Harveſt in *Ægypt*. For, according to the account of * *Radzevil*, the River riſing in *June*, and the Banks being cut in *September*, they ſow about S. *Andrews*, when the Floud is retired, and the moderate drineſs of the ground permitteth. So that the Barley anticipating the Wheat, either in time of ſowing or growing, might be in Ear in *February*.

* Radzevil's Travels.

The account of † *Pliny* is little different. They caſt the Seed upon the ſlime and Mudd when the River is down, which commonly happeneth in the beginning of *November*. They begin to reap and cut down a little before the Calends of *April*, about the middle of *March*, and in the Month of *May* their Harveſt is in. So that Barley anticipating Wheat, it might be in Ear in *February*, and Wheat not yet grown up, at leaſt to the Spindle or Ear, to be deſtroyed by the Hail. For they cut down about the middle of *March*, at leaſt their forward Corns, and in the Month of *May* all ſorts of Corns were in.

† Plin. *lib.* 18. *cap.* 18.

The *turning of the River into Blood* ſhews in what Month this happened not. That is, not when the River had over-flown; for it is ſaid, *the Ægyptians digged round about the River for Water to drink*, which they could not have done, if the River had been out, and the Fields under Water.

In the ſame Text you cannot, without ſome heſitation, paſs over the tranſlation of Rye, which the Original nameth *Caſſumeth*, the Greek rendreth *Olyra*, the French and Dutch *Spelta*, the Latin *Zea*, and not *Secale* the known word for Rye. But this common Rye ſo well underſtood at preſent, was not diſtinctly deſcribed, or not well known from early Antiquity. And therefore, in this uncertainty, ſome have thought it to have been the *Typha* of the Ancients. *Cordus* will have it to be *Olyra*, and *Ruellius* ſome kind of *Oryza*. But having no vulgar and well known name for thoſe Grains, we warily embrace an appellation of near affinity, and tolerably render it *Rye*.

While Flax, Barley, Wheat and Rye are named, ſome may wonder why no mention is made of Ryce, wherewith, at preſent, *Ægypt* ſo much aboundeth. But whether that Plant grew ſo early in that Country, ſome doubt may be made: for Ryce is originally a Grain of *India*, and might not then be tranſplanted into *Ægypt*.

36. *Let them become as the Graſs growing upon the Houſe top, which withereth before it be plucked up, whereof the mower filleth not his hand, nor he that bindeth Sheaves his boſome.* Though the *filling of the hand*, and mention of *Sheaves of Hay* may ſeem ſtrange unto us, who uſe neither handfulls nor Sheaves

Sheaves of Graſs, in Pſal. 12. 6, 7.

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in that kind of Husbandry, yet may it be properly taken, and you are not like to doubt thereof, who may find the like expressions in the Authors *de Re rustica*, concerning the old way of this Husbandry.

* Columella *lib. 2 cap. 22.* **Columella*, delivering what Works were not to be permitted upon the Roman *Feriæ*, or Festivals, among others sets down, that upon such days, it was not lawfull to carry or bind up Hay, *Nec fœnum vincire nec vehere per religiones Pontificum licet.*

† Varro *lib. 1. cap. 49.* *Marcus* † *Varro*, is more particular; *Primum de pratis herbarum cum crescere desiit, subsecari falcibus debet, & quoad peracescat furcillis versari, cum peracuit, de his manipulos fieri & vehi in villam.*

And their course of mowing seems somewhat different from ours. For they cut not down clear at once, but used an after section, which they peculiarly called *Sicilitium*, according as the word is expounded by *Georgius Alexandrinus*, and *Beroaldus* after *Pliny*; *Sicilire est falcibus consectari quæ fœniseca præterierunt, aut ea secare quæ fœniseca præterierunt.*

Juniper Tree, in 1 King. 19. 5, &c. 37. When 'tis said that *Elias* lay and slept under a Juniper Tree, some may wonder how that Tree, which in our parts groweth but low and shrubby, should afford him shade and covering. But others know that there is a lesser and a larger kind of that Vegetable; that it makes a Tree in its proper soil and region. And may find in *Pliny* that in the Temple of *Diana Saguntina* in *Spain*, the Rafters were made of Juniper.

* Psal. 120. 4. In that expression of **David*, *Sharp Arrows of the mighty, with Coals of Juniper*; Though Juniper be left out in the last Translation, yet may there be an Emphatical sence from that word; since Juniper abounds with a piercing Oil, and makes a smart Fire. And the rather, if that quality be half true, which *Pliny* affirmeth, that the Coals of Juniper raked up will keep a glowing Fire for the space of a year. For so the expression will Emphatically imply, not onely the *smart burning but the lasting fire of their malice.*

* Job 30. 3, 4. That passage of * *Job*, wherein he complains that poor and half famished fellows despised him, is of greater difficulty; *For want and famine they were solitary, they cut up Mallows by the Bushes, and Juniper roots for meat.* Wherein we might at first doubt the Translation, not only from the Greek Text, but the assertion of *Dioscorides*, who affirmeth that the roots of Juniper are of a venomous quality. But *Scaliger* hath disproved the same from the practice of the African Physicians, who use the decoction of Juniper roots against the Venereal Disease. The Chaldee reads it *Genista*; or some kind of Broom, which will be also unusual and hard Diet, except thereby we understand the *Orobanche*, or Broom Rape, which groweth from the roots of Broom; and which, according to *Dioscorides*, men used to eat raw or boiled in the manner of *Asparagus*.

And, therefore, this expression doth highly declare the misery, poverty and extremity of the persons who were now mockers of him; they being so contemptible and necessitous, that they were fain to be content, not with a mean Diet, but such as was no Diet at all, the roots of Trees, the roots of Juniper, which none would make use of for Food, but in the lowest necessity, and some degree of famishing.

Scarlet Tincture, in Gen. 38. 28. Exod. 25. 4, &c. 38. While some have disputed whether *Theophrastus* knew the Scarlet Berry, others may doubt whether that noble tincture were known unto the Hebrews, which notwithstanding seems clear from the early and iterated expressions of Scripture concerning the Scarlet Tincture, and is the less to be doubted because the Scarlet Berry grew plentifully in the Land of *Canaan*, and so they were furnished with the Materials of that Colour. For though *Dioscorides* saith it groweth in *Armenia* and *Cappadocia*; yet that it also grew in *Judæa*, seems more than probable from the account of *Bellonius*, who observed it to be so plentifull in that Country, that it afforded a profitable Commodity, and great quantity thereof was transported by the Venetiam Merchants.

How this should be fitly expressed by the word *Tolagnoth*, *Vermis*, or *Worm*, may be made out from *Pliny*, who calls it *Coccus Scolecius*, or the

Wormy

Wormy Berry; as also from the name of that Colour called *Vermilion*, or the *Worm Colour*; and which is also answerable unto the true nature of it. For this is no proper Berry containing the fructifying part, but a kind of Vesticular excrescence, adhering commonly to the Leaf of the *Ilex Coccigera*, or dwarf and small kind of Oak, whose Leaves are always green, and its proper seminal parts Acorns. This little Bagg containeth a red Pulp, which, if not timely gathered, or left to it self, produceth small red Flies, and partly a red Powder, both serviceable unto the tincture. And therefore, to prevent the generation of Flies, when it is first gathered, they sprinkle it over with Vinegar, especially such as make use of the fresh Pulp for the confection of *Alkermes*; which still retaineth the Arabick name, from the *Kermes-berry*; which is agreeable unto the description of *Bellonius* and *Quinqueranus*. And the same we have beheld in *Provence* and *Languedock*, where it is plentifully gathered, and called *Manna Rusticorum*; from the considerable profit which the Peasants make by gathering of it.

39. Mention is made of Oaks in divers parts of Scripture, which though the Latin sometimes renders a Turpentine Tree, yet surely some kind of Oak may be understood thereby; but whether our common Oak, as is commonly apprehended, you may well doubt; for the common Oak, which prospereth so well with us, delighteth not in hot regions. And that diligent Botanist, *Bellonius*, who took such particular notice of the Plants of *Syria* and *Judæa*, observed not the vulgar Oak in those parts. But he found the *Ilex*, *Chesne Vert*, or Ever-green Oak, in many places; as also that kind of Oak which is properly named *Esculus*: and he makes mention thereof in places about *Jerusalem*, and in his Journey from thence unto *Damascus*, where he found *Montes Ilice, & Esculo virentes*; which, in his Discourse of *Lemnos*, he saith are always green. And therefore when it is said *of *Absalom*, that his *Mule went under the thick Boughs of a great Oak, and his Head caught hold of the Oak, and he was taken up between the Heaven and the Earth*, that Oak might be some *Ilex*, or rather *Esculus*. For that is a thick and bushy kind, in *Orbem comosa*, as *Dalechampius*; *ramis in orbem dispositis comans*, as *Renealmus* describeth it. And when it is said † that *Ezechias broke down the Images, and cut down the Groves*, they might much consist of Oaks, which were sacred unto Pagan Deities, as this more particularly, according to that of *Virgil*,

Oaks, in Gen. 35. 4, 8. Josh. 24. 26. Isa. 1. 29. Ezek. 27. 6. Hosea 4. 13, &c.

* 2 Sam. 18. 9, 14.

† 2 King. 18. 4.

—Nemorumque Jovi quæ maxima frondet
Esculus.—

And, in *Judæa*, where no Hogs were eaten by the Jews, and few kept by others, 'tis not unlikely that they most cherished the *Esculus*, which might serve for Food of men. For the Acorns thereof are the sweetest of any Oak, and taste like Chesnuts; and so, producing an edulious or esculent Fruit, is properly named *Esculus*.

They which know the *Ilex*, or Ever-green Oak, with somewhat prickled Leaves, named Πέυκη, will better understand the irreconcileable answer of the two Elders, when the one accused *Susanna* of incontinency under a Πέυκη, or Ever-green Oak, the other under a Σχῖνος; *Lentiscus*, or Mastick Tree, which are so different in Bigness, Boughs, Leaves and Fruit, the one bearing Acorns, the other Berries: And, without the knowledge hereof, will not emphatically or distinctly understand that of the Poet,

Flavaque de viridi stillabant Ilice mella.

40. When we often meet with the Cedars of *Libanus*, that expression may be used, not only because they grew in a known and neighbour Country, but also because they were of the noblest and largest kind of that Vegetable. And we find the Phœnician Cedar magnified by the Ancients. The Cedar of *Libanus* is a *coniferous* Tree, bearing *Cones* or Cloggs, (not Berries) of such a vastness, that *Melchior Lussy*, a great

Cedars of Libanus.

Traveller, found one upon *Libanus* as big as seven men could compass. Some are now so curious as to keep the Branches and *Cones* thereof among their rare Collections. And, though much Cedar Wood be now brought from *America*, yet 'tis time to take notice of the true Cedar of *Libanus*, imployed in the Temple of *Solomon*; for they have been much destroyed and neglected, and become at last but thin. *Bellonius* could reckon but twenty eight, *Rowolfius* and *Radzevil* but twenty four, and *Bidulphus* the same number. And a later account of * some English Travellers saith, that they are now but in one place, and in a small compass, in *Libanus*.

* *A Journey to* Jerusalem, 1672.

Uncircumcisid Fruit, in Levit. 19. 23.

Quando ingressi fueritis terram, & plantaveritis in illa ligna Pomifera, auferetis praputia eorum. Poma quæ germinant, immunda erunt vobis, nec edetis ex eis. Quarto autem anno, omnis fructus eorum sanctificabitur, laudabilis Domino. Quinto autem anno comedetis fructus. By this Law they were injoyned not to eat of the Fruits of the Trees which they planted for the *first three years*: and, as the Vulgar expresseth it, to take away the Prepuces, from such Trees, during that time; the Fruits of the *fourth year being holy unto the Lord*, and those of the fifth allowable unto others. Now if *auferre præputia* be taken, as many learned men have thought, to pluck away the bearing Buds, before they proceed unto Flowers or Fruit, you will readily apprehend the Metaphor, from the analogy and similitude of those Sprouts and Buds, which, shutting up the fruitfull particle, resembleth the preputial part.

And you may also find herein a piece of Husbandry not mentioned in *Theophrastus*, or *Columella*. For by taking away of the Buds, and hindring fructification, the Trees become more vigorous, both in growth and future production. By such a way King *Pyrrhus* got into a lusty race of Beeves, and such as were desired over all *Greece*, by keeping them from Generation untill the ninth year.

And you may also discover a physical advantage of the goodness of the Fruit, which becometh less crude and more wholsome, upon the fourth or fifth years production.

Partition of Plants into Herb and Tree, in Gen. 1. 11.

41. While you read in *Theophrastus*, or modern Herbalists, a strict division of Plants, into *Arbor*, *Frutex*, *Suffrutex & Herba*, you cannot but take notice of the Scriptural division at the Creation, into *Tree* and *Herb*: and this may seem too narrow to comprehend the Classis of Vegetables; which, notwithstanding, may be sufficient, and a plain and intelligible division thereof. And therefore in this difficulty concerning the division of Plants, the learned Botanist, *Cæsalpinus*, thus concludeth, *Clarius agemus si alterâ divisione neglectâ, duo tantum Plantarum genera substituamus, Arborem scilicet, & Herbam, conjungentes cum Arboribus Frutices, & cum Herba Suffrutices*; *Frutices* being the lesser Trees, and *Suffrutices* the larger, harder and more solid Herbs.

And this division into Herb and Tree, may also suffice, if we take in that natural ground of the division of perfect Plants, and such as grow from Seeds. For Plants, in their first production, do send forth two Leaves adjoining to the Seed; and then afterwards, do either produce two other Leaves, and so successively before any Stalk; and such go under the name of Πόα, Βοτάνη, or *Herb*; or else, after the first Leaves succeeding to the Seed Leaves, they send forth a Stalk, or rudiment of a Stalk before any other Leaves, and such fall under the Classis of Δένδρον, or *Tree*. So that, in this natural division, there are but two grand differences, that is, *Tree* and *Herb*. The *Frutex* and *Suffrutex* have the way of production from the Seed, and in other respects the *Suffrutices*, or *Cremia*, have a middle and participating nature, and referable unto Herbs.

The Bay Tree, in Psal. 37. 35.

42. *I have seen the ungodly in great power, and flourishing like a green Bay Tree.* Both Scripture and humane Writers draw frequent illustrations from Plants. *Scribonius Largus* illustrates the old Cymbals from the *Cotyledon Palustris*, or *Umbilicus Veneris*. Who would expect to find *Aaron*'s Mitre in any Plant? yet *Josephus* hath taken some pains to make out the same in the seminal knop of *Hyoscyamus*, or Henbane. The Scripture compares the Figure of Manna unto the Seed of Coriander. In * *Jeremy*

* Jer. 10. 5.

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we find the expreſſion, *Streight as a Palm Tree*: And here the wicked in their flouriſhing ſtate are likened unto a Bay Tree. Which, ſufficiently anſwering the ſenſe of the Text, we are unwilling to exclude that noble Plant from the honour of having its name in Scripture. Yet we cannot but obſerve, that the Septuagint renders it *Cedars*, and the Vulgar accordingly, *Vidi impium ſuperexaltatum, & elevatum ſicut Cedros Libani*; and the Tranſlation of *Tremelius* mentions neither Bay nor Cedar; *Seſe explicantem tanquam Arbor indigena virens*; which ſeems to have been followed by the laſt Low Dutch Tranſlation. A private Tranſlation renders it like *a green ſelf growing* * *Laurel*. The High Dutch of *Luther*'s Bible, retains the word *Laurel*; and ſo doth the old Saxon and Iſland Tranſlation; ſo alſo the French, Spaniſh; and Italian of *Diodati*: yet his Notes acknowledge that ſome think it rather a Cedar, and others any large Tree in a proſpering and natural Soil.

* Ainſworth.

But however theſe Tranſlations differ, the ſenſe is allowable and obvious unto apprehenſion: when no particular Plant is named, any proper to the ſenſe may be ſuppoſed; where either Cedar or Laurel is mentioned, if the preceding words [*exalted and elevated*] be uſed, they are more appliable unto the Cedar; where the word [*flouriſhing*] is uſed, it is more agreeable unto the Laurel, which, in its proſperity, abounds with pleaſant Flowers, whereas thoſe of the Cedar are very little, and ſcarce perceptible, anſwerable to the Firre, Pine and other coniferous Trees.

The Figg Tree, in S. Mark. 11. 13, &c.

43. *And in the morning, when they were come from Bethany, he was hungry; and ſeeing a Figg Tree afar off having Leaves, he came, if haply he might find any thing thereon; and when he came to it, he found nothing but Leaves: for the time of Figgs was not yet.* Singular conceptions have paſſed from learned Men to make out this paſſage of S. *Mark*, which * S. *Matthew* ſo plainly delivereth; moſt Men doubting why our Saviour ſhould curſe the Tree for bearing no Fruit, when the time of Fruit was not yet come; or why it is ſaid that *the Time of Figgs was not yet*, when, notwithſtanding, Figgs might be found at that ſeaſon.

* Matt. 21. 19.

† *Heinſius*, who thinks that *Elias* muſt ſalve the doubt, according to the received Reading of the Text, undertaketh to vary the ſame, reading ἦν γὰρ ἦν, καιρὸς σύκων, that is, *for where he was, it was the ſeaſon or time for Figgs.*

† Heinſius *in* Nonnum.

‖ A learned Interpreter of our own, without alteration of accents or words, endeavours to ſalve all, by another interpretation of the ſame, Οὐ γὰρ καιρὸς σύκων, *For it was not a good or ſeaſonable year for Figgs.*

‖ *Dr.* Hammond.

But, becauſe Men part not eaſily with old beliefs, or the received conſtruction of words, we ſhall briefly ſet down what may be alledged for it.

And, firſt, for the better comprehenſion of all deductions hereupon, we may conſider the ſeveral differences and diſtinctions both of Figg Trees and their Fruits. *Suidas* upon the word Ἰσχάς makes four diviſions of Figgs, Ὄλυνθος, Φήλεξ, Σῦκον and Ἰσχάς. But becauſe Φήλεξ makes no conſiderable diſtinction, learned Men do chiefly inſiſt upon the three others; that is, Ὄλυνθος, or *Groſſus*, which are the Buttons, or ſmall ſort of Figgs, either not ripe, or not ordinarily proceeding to ripeneſs, but fall away at leaſt in the greateſt part, and eſpecially in ſharp Winters; which are alſo named Συκάδες, and diſtinguiſhed from the Fruit of the wild Figg, or *Caprificus*, which is named Ἐρινεὸς, and never cometh unto ripeneſs. The ſecond is called Σῦκον, or *Ficus*, which commonly proceedeth unto ripeneſs in its due ſeaſon. A third the ripe Figg dried, which maketh the Ἰσχάδες, or *Carrier*.

Of Figg Trees there are alſo many diviſions: For ſome are *prodromi*, or precocious, which bear Fruit very early, whether they bear once, or oftner in the year; ſome are *proterica*, which are the moſt early of the precocious Trees, and bear ſooneſt of any; ſome are *æſtiva*, which bear in the common ſeaſon of the Summer, and ſome *ſerotina* which bear very late.

Some are *biferous* and *triferous*, which bear twice or thrice in the year, and ſome are of the ordinary ſtanding courſe, which make up the expected ſeaſon of Figgs.

Again, Some Figg Trees, either in their proper kind, or fertility in some single ones, do bear Fruit or rudiments of Fruit all the Year long; as is annually observable in some kind of Figg Trees in hot and proper regions; and may also be observed in some Figg Trees of more temperate Countries, in years of no great disadvantage, wherein, when the Summer-ripe Figg is past, others begin to appear, and so, standing in Buttons all the Winter, do either fall away before the Spring, or else proceed to ripeness.

Now according to these distinctions, we may measure the intent of the Text, and endeavour to make out the expression. For, considering the diversity of these Trees, and their several fructifications, probable or possible it is, that some thereof were implied, and may literally afford a solution.

And first, though it was not the season for Figgs, yet some Fruit might have been expected, even in ordinary bearing Trees. For the *Grossi* or Buttons appear before the Leaves, especially before the Leaves are well grown. Some might have stood during the Winter, and by this time been of some growth: Though many fall off, yet some might remain on, and proceed towards maturity. And we find that good Husbands had an art to make them hold on, as is delivered by *Theophrastus*.

The Σῦκον, or common Summer Figg was not expected; for that is placed by *Galen* among the *Fructus Horarii*, or *Horai*, which ripen in that part of Summer, called Ὦρα, and stands commended by him above other Fruits of that season. And of this kind might be the Figgs which were brought unto *Cleopatra* in a Basket together with an Asp, according to the time of her death on the nineteenth of *August*. And that our Saviour expected not such Figgs, but some other kind, seems to be implied in the indefinite expression, *if haply he might find any thing thereon*; which in that Country, and the variety of such Trees, might not be despaired of, at this season, and very probably hoped for in the first precocious and early bearing Trees. And that there were precocious and early bearing Trees in *Judæa*, may be illustrated from some expressions in Scripture concerning precocious Figgs; * *Calathus unus habebat Ficus bonas nimis, sicut solent esse Ficus primi temporis; One Basket had very good Figgs, even like the Figgs that are first ripe.* And the like might be more especially expected in this place, if this remarkable Tree be rightly placed in some Mapps of *Jerusalem*; for it is placed, by *Adrichomius*, in or near *Bethphage*, which some conjectures will have to be the *House of Figgs*: and at this place Figg Trees are still to be found, if we consult the Travels of *Bidulphus*.

* Jer. 24. 2.

Again, In this great variety of Figg Trees, as precocious, proterical, biferous, triferous, and always bearing Trees, something might have been expected, though the time of common Figgs was not yet. For some Trees bear in a manner all the year; as may be illustrated from the Epistle of the Emperour *Julian*, concerning his Present of *Damascus* Figgs, which he commendeth from their successive and continued growing and bearing, after the manner of the Fruits which *Homer* describeth in the Garden of *Alcinous*. And though it were then but about the eleventh of *March*, yet, in the Latitude of *Jerusalem*, the Sun at that time hath a good power in the day, and might advance the maturity of precocious often-bearing or ever-bearing Figgs. And therefore when it is said * that S. *Peter* stood and warmed himself by the Fire in the Judgment Hall, and the reason is added [† *for it was cold*] that expression might be interposed either to denote the coolness in the Morning, according to hot Countries, or some extraordinary and unusual coldness, which happened at that time. For the same *Bidulphus*, who was at that time of the year at *Jerusalem*, saith, that it was then as hot as at *Midsummer* in *England*: and we find in Scripture that the first Sheaf of Barley was offer'd in *March*.

* S. Mark 14. 67. S. Luke 22. 55. 56. † S. John 18. 18.

Our Saviour therefore, seeing a Figg Tree with Leaves well spread, and so as to be distinguished a far off, went unto it, and when he came, found nothing but Leaves; he found it to be no precocious, or always-bearing Tree: And though it were not the time for Summer Figgs, yet he found

no

no rudiments thereof; and though he expected not common Figgs, yet ſomething might happily have been expected of ſome other kind, according, to different fertility, and variety of production; but, diſcovering nothing, he found a Tree anſwering the State of the Jewiſh Rulers, barren unto all expectation.

And this is conſonant unto the myſtery of the Story, wherein the Figg Tree denoteth the Synagogue and Rulers of the Jews, whom God having peculiarly cultivated, ſingularly bleſſed and cheriſhed, he expected from them no ordinary, ſlow, or cuſtomary fructification, but an earlineſs in good Works, a precocious or continued fructification, and was not content with common after-bearing; and might juſtly have expoſtulated with the Jews, as God by the Prophet * *Micah* did with their Forefathers; *Præcoquas Ficus deſideravit Anima mea, My Soul longed for* (or deſired) *early ripe Fruits, but ye are become as a Vine already gathered, and there is no cluſter upon you.* * Micah 7. 1.

Laſtly, In this account of the Figg Tree, the myſtery and ſymbolical ſenſe is chiefly to be looked upon. Our Saviour, therefore, taking a hint from his hunger to go unto this ſpecious Tree, and intending, by this Tree, to declare a Judgment upon the Synagogue and people of the Jews, he came unto the Tree, and, after the uſual manner, inquired, and looked about for ſome kind of Fruit, as he had done before in the Jews, but found nothing but Leaves and ſpecious outſides, as he had alſo found in them; and when it bore no Fruit like them, when he expected it, and came to look for it, though it were not the time of ordinary Fruit, yet failing when he required it, in the myſterious ſenſe, 'twas fruitleſs longer to expect it. For he had come unto them, and they were nothing fructified by it, his departure approached, and his time of preaching was now at an end.

Now, in this account, beſides the Miracle, ſome things are naturally conſiderable. For it may be queſtion'd how the Figg Tree, naturally a a fruitfull Plant, became barren, for it had no ſhow or ſo much as rudiment of Fruit: And it was in old time, a ſignal Judgment of God, that *the Figg Tree ſhould bear no Fruit*: and therefore this Tree may naturally be conceived to have been under ſome Diſeaſe indiſpoſing it to ſuch fructification. And this, in the Pathology of Plants, may be the Diſeaſe of φυλλομανία, ἐμφυλλισμὸς, or ſuperfoliation mentioned by *Theophraſtus*; whereby the fructifying Juice is ſtarved by the exceſs of Leaves; which in this Tree were already ſo full ſpread, that it might be known and diſtinguiſhed a far off. And this was, alſo, a ſharp reſemblance of the hypocriſie of the Rulers, made up of ſpecious outſides, and fruitleſs oſtentation, contrary to the Fruit of the Figg Tree, which, filled with a ſweet and pleaſant pulp, makes no ſhew without, not ſo much as of any Flower.

Some naturals are alſo conſiderable from the propriety of this puniſhment ſettled upon a Figg Tree: For infertility and barrenneſs ſeems more intolerable in this Tree than any, as being a Vegetable ſingularly conſtituted for production; ſo far from bearing no Fruit that it may be made to bear almoſt any. And therefore the Ancients ſingled out this as the fitteſt Tree whereon to graft and propagate other Fruits, as containing a plentifull and lively Sap, whereby other Cyons would proſper: And, therefore, this Tree was alſo ſacred unto the Deity of Fertility: and the *Statua* of *Priapus* was made of the Figg Tree;

Olim Truncus eram Ficulnus inutile Lignum.

It hath alſo a peculiar advantage to produce and maintain its Fruit above all other Plants, as not ſubject to miſcarry in Flowers and Bloſſomes, from accidents of Wind and weather. For it beareth no Flowers outwardly, and ſuch as it hath, are within the Coat, as the later examination of Naturaliſts hath diſcovered.

Laſtly, it was a Tree wholly conſtituted for Fruit, wherein if it faileth, it is in a manner uſeleſs, the Wood thereof being of ſo little uſe, that it

it affordeth proverbial expressions,

Homo Ficulneus, argumentum Ficulneum.

for things of no validity.

The Palm Tree, in Cant. 7. 8.

44. *I said I will go up into the Palm Tree, and take hold of the Boughs thereof.* This expression is more agreeable unto the Palm than is commonly apprehended, for that it is a tall bare Tree bearing its Boughs but at the top and upper part; so that it must be ascended before its Boughs or Fruit can be attained: And the going, getting or climbing up, may be Emphatical in this Tree; for the Trunk or body thereof is naturally contrived for ascension, and made with advantage for getting up, as having many welts and eminencies, and so as it were a natural Ladder, and Staves by which it may be climbed, as * *Pliny* observeth, *Palmæ teretes atque proceres, densis quadratisque pollicibus faciles se ad scandendum præbent*, by this way men are able to get up into it. And the Figures of Indians thus climbing the same are graphically described in the Travels of *Linschoten*. This Tree is often mentioned in Scripture, and was so remarkable in *Judæa*, that in after-times it became the Emblem of that Country, as may be seen in that Medal of the Emperour *Titus*, with a Captive Woman sitting under a Palm, and the Inscription of *Judæa Capta*. And *Pliny* confirmeth the same when he saith, *Judæa Palmis inclyta.*

* Plin. 13. cap. 4.

Tilies, in Cant. 2. 1, 2. 16.

45. Many things are mention'd in Scripture, which have an Emphasis from this or the neighbour Countries: For besides the Cedars, the Syrian Lilies are taken notice of by Writers. That expression in the *Canticles* * *Thou art fair, thou art fair, thou hast Doves eyes*, receives a particular character, if we look not upon our common Pigeons, but the beauteous and fine ey'd Doves of *Syria*.

* Cant. 4. 1.

† Levit. 3. 9.

‖ Aristot. *Hist. Animal. lib.* 8.

When the Rump is so strictly taken notice of in the Sacrifice of the Peace Offering, in these words, † *The whole Rump, it shall be taken off hard by the Back-bone*, it becomes the more considerable in reference to this Country, where Sheep had so large Tails; which, according to ‖ *Aristotle*, were a Cubit broad; and so they are still, as *Bellonius* hath delivered.

† Cant. 4. 2.

When 'tis said in the *Canticles*, † *Thy Teeth are as a Flock of Sheep which go up from the washing, whereof every one beareth Twins, and there is not one barren among them*; it may seem hard unto us of these parts to find whole Flocks bearing Twins, and not one barren among them; yet may this be better conceived in the fertile Flocks of those Countries, where Sheep have so often two, sometimes three, and sometimes four, and which is so frequently observed by Writers of the neighbour Country of *Ægypt*. And this fecundity, and fruitfulness of their Flocks, is answerable unto the expression of the Psalmist *, *That our Sheep may bring forth thousands and ten thousands in our Streets.* And hereby, besides what was spent at their Tables, a good supply was made for the great consumption of Sheep in their several kinds of Sacrifices; and of so many thousand Male unblemished yearling Lambs, which were required at their Passeovers.

* Psal. 144. 13.

Nor need we wonder to find so frequent mention both of Garden and Field Plants; since *Syria* was notable of old for this curiosity and variety, according to *Pliny*, *Syria hortis operosissima*; and since *Bellonius* hath so lately observed of *Jerusalem*, that its hilly parts did so abound with Plants, that they might be compared unto Mount *Ida* in *Crete* or *Candia*; which is the most noted place for noble Simples yet known.

Trees and Herb not expresly nam'd in Scripture Levit. 23. 40.

46. Though so many Plants have their expres Names in Scripture, yet others are implied in some Texts which are not explicitly mention'd. In the Feast of *Tabernacles* or *Booths*, the Law was this *, *Thou shalt take unto thee Boughs of Goodly Trees, Branches of the Palm, and the Boughs of thick Trees, and Willows of the Brook.* Now though the Text descendeth not unto particulars of the *goodly Trees*, and *thick Trees*; yet *Maimonides* will tell us that for a *goodly Tree* they made use of the Citron Tree, which

which is fair and goodly to the eye, and well prospering in that Country: And that for the *thick Trees* they used the Myrtle, which was no rare or infrequent Plant among them. And though it groweth but low in our Gardens, was not a little Tree in those parts; in which Plant also the Leaves grew thick, and almost covered the Stalk. And *Curtius* * *Symphorianus* in his description of the *Exotick* Myrtle, makes it, *Folio densissimo senis in ordinem versibus.* The Paschal Lamb was to be eaten with bitterness or bitter Herbs, not particularly set down in Scripture: but the Jewish Writers declare, that they made use of Succory, and wild Lettuce, which herbs while some conceive they could not get down, as being very bitter, rough and prickly, they may consider that the time of the Passeover was in the Spring, when these Herbs are young and tender, and consequently less unpleasant: besides; according to the Jewish custom, these Herbs were dipped in the *Charoseth* or Sawce made of Raisins stamped with Vinegar, and were also eaten with Bread; and they had four Cups of Wine allowed unto them; and it was sufficient to take but a pittance of Herbs, or the quantity of an Olive.

* Curtius *de Hortis.*

47. Though the famous paper Reed of *Ægypt*, be only particularly named in Scripture; yet when Reeds are so often mention'd without special name or distinction, we may conceive their differences may be comprehended, and that they were not all of one kind, or that the common Reed was only implied. For mention is made in* *Ezekiel* of *a measuring Reed of six Cubits*: we find that they smote our Saviour on the Head with a † Reed, and put a Sponge with Vinegar on a Reed, which was long enough to reach to his mouth, while he was upon the Cross; And with such differences of Reeds, *Vallatory*, *Sagittary*, *Scriptory*, and others they might be furnished in *Judæa*: For we find in the portion of ‖ *Ephraim*, *Vallis arundineti*; and so set down in the Mapps of *Adricomius*, and in our Translation the River *Kana*, or Brook of *Canes*. And *Bellonius* tells us that the River *Jordan* affordeth plenty and variety of Reeds; out of some whereof the Arabs make Darts, and light Lances, and out of others, Arrows; and withall that there plentifully groweth the fine *Calamus*, *Arundo scriptoria*, or writing Reed, which they gather with the greatest care, as being of singular use and commodity at home and abroad; a hard Reed about the compass of a Goose or Swans Quill, whereof I have seen some polished and cut with a Webb; which is in common use for writing throughout the Turkish Dominions, they using not the Quills of Birds.

Reeds in Scripture.

* Ezek 40. 5.

† S. Matt. 27. 30, 48.

‖ Josh. 16. 17.

And whereas the same Authour with other describers of these parts affirmeth, that the River *Jordan*, not far from *Jericho*, is but such a Stream as a Youth may throw a Stone over it, or about eight fathoms broad, it doth not diminish the account and solemnity of the miraculous passage of the Israelites under *Joshua*; For it must be considered, that they passed it in the time of Harvest, when the River was high, and the Grounds about it under water, according to that pertinent parenthesis, *As the Feet of the Priests, which carried the Ark, were dipped in the brim of the Water,* (*for* **Jordan overfloweth all its Banks at the time of Harvest.*) In this consideration it was well joined with the great River *Euphrates*, in that expression in † *Ecclesiasticus*, *God maketh the understanding to abound like Euphrates, and as Jordan in the time of Harvest.*

* Josh. 3. 15.

† Ecclus. 24. 26.

48. *The Kingdom of Heaven is likened unto a man which sowed good Seed in his Field, but while men slept, his Enemy came and sowed Tares* (or as the Greek, *Zizania*) *among the Wheat.*

Zizania, in S. Matt. 13. 24, 25, &c.

Now, how to render *Zizania*, and to what species of Plants to confine it, there is no slender doubt; for the word is not mention'd in other parts of Scripture, nor in any ancient Greek Writer: it is not to be found in *Aristotle*, *Theophrastus*, or *Dioscorides*. Some Greek and Latin Fathers have made use of the same, as also *Suidas* and *Phavorinus*; but probably they have all derived it from this Text.

And therefore this obscurity might easily occasion such variety in Translations and Expositions. For some retain the word *Zizania*, as the Vulgar. that of *Beza*, of *Junius*, and also the Italian and Spanish. The Low Dutch

Dutch renders it *Oncruidt*, the German *Oncraut*, or *Herba Mala*, the French *Yuroye* or *Lolium*, and the English *Tares*.

Besides, This being conceived to be a Syriack word, it may still add unto the uncertainty of the sense. For though this Gospel were first written in Hebrew, or Syriack, yet it is not unquestionable whether the true Original be any where extant: And that Syriack Copy which we now have, is conceived to be of far later time than S. *Matthew*.

Expositours and Annotatours are also various. *Hugo Grotius* hath passed the word *Zizania* without a Note. *Diodati*, retaining the word *Zizania*, conceives that it was some peculiar Herb growing among the Corn of those Countries, and not known in our Fields. But *Emanuel de Sa* interprets it, *Plantas semini noxias*; and so accordingly some others.

Buxtorfius, in his Rabbinical Lexicon, gives divers interpretations, sometimes for degenerated Corn, sometimes for the black Seeds in Wheat, but withal concludes, *an hæc sit eadem vox aut species cum Zizaniâ apud Evangelistam, quærant alii.* But Lexicons and Dictionaries by *Zizania* do almost generally understand *Lolium*, which we call *Darnel*, and commonly confine the signification to that Plant: Notwithstanding, since *Lolium* had a known and received Name in Greek, some may be apt to doubt, why, if that plant were particularly intended, the proper Greek word was not used in the Text. For * *Theophrastus* named *Lolium* Αἶρα, and hath often mentioned that Plant; and in one place saith, that Corn doth sometimes *Lolescere* or degenerate into *Darnel*. *Dioscorides*, who travelled over *Judæa*, gives it the same name, which is also to be found in *Galen*, *Ætius* and *Ægineta*; and *Pliny* hath sometimes latinized that word into *Æra*.

* ἐξαίρησις. Theophrast. *Hist. Plant.* l. 8.

Besides, *Lolium* or Darnel shews it self in the Winter, growing up with the Wheat; and *Theophrastus* observed, that it was no Vernal Plant, but came up in the Winter; which will not well answer the expression of the Text, *And when the Blade came up, and brought forth Fruit*, or gave evidence of its Fruit, *the Zizania* appeared. And if the Husbandry of the Ancients were agreeable unto ours, they would not have been so earnest to weed away the Darnel; for our Husbandmen do not commonly weed it in the Field, but seperate the Seeds after Thrashing. And therefore *Galen* deliver-eth, That in an unseasonable year, and great scarcity of Corn, when they neglected to separate the Darnel, the Bread proved generally unwholesome, and had evil effects on the Head,

Our old and later Translation renders *Zizania*, *Tares*, which name our English Botanists give unto *Aracus*, *Cracca*, *Vicia sylvestris*, calling them Tares, and strangling Tares. And our Husbandmen by Tares understand some sorts of wild Fitches, which grow amongst Corn, and clasp upon it, according to the Latin Etymology, *Vicia à Vinciendo*. Now in this uncertainty of the Original, Tares as well as some others, may make out the sense, and be also more agreeable unto the circumstances of the Parable. For they come up and appear what they are, when the Blade of the Corn is come up, and also the Stalk and Fruit discoverable. They have likewise little spreading Roots, which may intangle or rob the good Roots, and they have also tendrils and claspers, which lay hold of what grows near them, and so can hardly be weeded without endangering the neighbour Corn.

However, if by *Zizania* we understand *Herbas segeti noxias*, or *vitia segetum*, as some Expositours have done, and take the word in a more general sense, comprehending several Weeds and Vegetables offensive unto Corn, according as the Greek word in the plural Number may imply, and as the learned * *Laurenbergius* hath expressed, *Runcare, quod apud nostrates Weden dicitur, Zizanias inutiles est evellere.* If, I say, it be thus taken, we shall not need to be definitive, or confine unto one particular Plant, from a word which may comprehend divers: And this may also prove a safer sense, in such obscurity of the Original.

* De Horti cultura.

And therefore since in this Parable the sower of the *Zizania* is the Devil, and the *Zizania* wicked persons; if any from this larger acception, will take in Thistles, Darnel, Cockle, wild strangling Fitches, Bindweed, *Trilu-*

lus,

lus, Reſtharrow and other *Vitia Segetum*; he may, both from the natural and ſymbolical qualities of thoſe Vegetables, have plenty of matter to illuſtrate the variety of his miſchiefs, and of the wicked of this World.

49. When 'tis ſaid in *Job*, *Let Thiſtles grow up inſtead of Wheat, and Cockle inſtead of barley*, the words are intelligible, the ſenſe allowable and ſignificant to this purpoſe: but whether the word *Cockle* doth ſtrictly conform unto the Original, ſome doubt may be made from the different Tranſlations of it; For the Vulgar renders it *Spina*, *Tremelius Vitia Frugum*, and the *Geneva Yuroye* or Darnel. Beſides, whether Cockle were common in the ancient Agriculture of thoſe parts, or what word they uſed for it, is of great uncertainty. For the Elder Botanical Writers have made no mention thereof, and the Moderns have given it the Name of *Pſeudomelanthium*, *Nigellaſtrum*, *Lychnoeides Segetum*, names not known unto Antiquity: And therefore our Tranſlation hath warily ſet down [*noiſome Weeds*] in the Margin. *Cockle, in* Job 31. 40.

Yyy TRACT

TRACT II.

OF

GARLANDS,

AND

Coronary or Garland-Plants.

SIR,

THE uſe of flowry Crowns and Garlands is of no ſlender Antiquity, and higher than I conceive you apprehend it. For, beſides the old Greeks and Romans, the Ægyptians made uſe hereof; who, beſide the bravery of their Garlands, had little Birds upon them to peck their Heads and Brows, and ſo to keep them ſleeping at their Feſtival compotations. This practice alſo extended as far as *India*: for at the Feaſt with the Indian King, it is peculiarly obſerved by *Philoſtratus* that their cuſtom was to wear Garlands, and come crowned with them unto their Feaſt.

The Crowns and Garlands of the Ancients were either Geſtatory, ſuch as they wore about their Heads or Necks; Portatory, ſuch as they carried at ſolemn Feſtivals; Penſile or Suſpenſory, ſuch as they hanged about the Poſts of their Houſes in honour of their Gods, as of *Jupiter Thyræus* or *Limeneus*; or elſe they were Depoſitory, ſuch as they laid upon the Graves and Monuments of the dead. And theſe were made up after all ways of Art, Compactile, Sutile, Plectile; for which Work there were στεφανοπλόκοι, or expert Perſons to contrive them after the beſt grace and property.

Though we yield not unto them in the beauty of flowry Garlands, yet ſome of thoſe of Antiquity were larger than any we lately meet with: for we find in *Athenæus* that a Myrtle Crown of one and twenty foot in compaſs was ſolemnly carried about at the Hellotian Feaſt in *Corinth*, together with the Bones of *Europa*.

And Garlands were ſurely of frequent uſe among them; for we read in *Galen* that when *Hippocrates* cured the great Plague of *Athens* by Fires kindled in and about the City; the fuel thereof conſiſted much of their Garlands. And they muſt needs be very frequent and of common uſe, the ends thereof being many. For they were convivial, feſtival, ſacrificial, nuptial, honorary, funebrial. We who propoſe unto our ſelves the pleaſure of two Senſes,

* *De Theriaca ad Piſonem.*

Senſes, and only ſingle out ſuch as are of Beauty and good Odour, cannot ſtrictly confine our ſelves unto imitation of them.

For, in their convivial Garlands, they had reſpect unto Plants preventing drunkenneſs, or diſcuſſing the exhalations from Wine; wherein, beſide Roſes, taking in Ivy, Vervain, Melilote, *&c.* they made uſe of divers of ſmall Beauty or good Odour. The ſolemn feſtival Garlands were made properly unto their Gods, and accordingly contrived from Plants ſacred unto ſuch Deities; and their ſacrificial ones were ſelected under ſuch conſiderations. Their Honorary Crowns triumphal, ovary, civical, obſidional, had little of Flowers in them: and their funebrial Garlands had little of beauty in them beſide Roſes, while they made them of Myrtle, Roſemary, Apium, *&c.* under ſymbolical intimations; but our florid and purely ornamental Garlands, delightfull unto ſight and ſmell, nor framed according to myſtical and ſymbolical conſiderations, are of more free election, and ſo may be made to excell thoſe of the Ancients; we having *China*, *India*, and a new World to ſupply us, beſide the great diſtinction of Flowers unknown unto Antiquity, and the varieties thereof ariſing from Art and Nature.

But, beſide Vernal, Æſtival and Autumnal made of Flowers, the Ancients had alſo Hyemal Garlands; contenting themſelves at firſt with ſuch as were made of Horn died into ſeveral Colours, and ſhaped into the Figures of Flowers, and alſo of *Æs Coronarium* or *Clincquant* or Braſs thinly wrought out into Leaves commonly known among us. But the curioſity of ſome Emperours for ſuch intents had Roſes brought from *Ægypt* untill they had found the art to produce late Roſes in *Rome*, and to make them grow in the Winter, as is delivered in that handſome Epigram of *Martial.*

At tu Romanæ juſſus jam cedere Brumæ
Mitte tuas meſſes, Accipe, Nile, Roſas.

Some American Nations, who do much excell in Garlands, content not themſelves only with Flowers, but make elegant Crowns of Feathers, whereof they have ſome of greater radiancy and luſtre than their Flowers: and ſince there is an Art to ſet into ſhapes, and curiouſly to work in choiceſt Feathers, there could nothing anſwer the Crowns made of the choiceſt Feathers of ſome *Tomineios* and Sun Birds.

The Catalogue of Coronary Plants is not large in *Theophraſtus*, *Pliny*, *Pollux*, or *Athenæus*: but we may find a good enlargement in the accounts of Modern Botaniſts; and additions may ſtill be made by ſucceſſive acquiſts of fair and ſpecious Plants, not yet tranſlated from foreign Regions, or little known unto our Gardens; he that would be complete may take notice of theſe following,

Flos Tigridis.
Flos Lyncis.
Pinea Indica Recchi, Talama Ouiedi.
Herba Paradiſea.
Volubilis Mexicanus.
Narciſſus Indicus Serpentarius.
Helichryſum Mexicanum.
Xicama.
Aquilegia novæ Hiſpaniæ Cacoxochitli Recchi.
Ariſtochea Mexicana.
Camaratinga ſive Caragunta quarta Piſonis.
Maracuia Granadilla.
Cambay ſive Myrtus Americana.
Flos Auriculæ Flor de la Oreia.
Floripendio novæ Hiſpaniæ.
Roſa Indica.

Zilium Indicum.
Fula Magori Garcia.
Champe Garciæ Champacca Bontii.
Daullontas frutex odoratus seu Chamamelum arboreſcens Bontii.
Beidelſar Alpini.
Sambuc.
Amberboi Turcarum.
Nuphar Ægyptium.
Lilionarciſſus Indicus.
Bamma Ægyptiacum.
Hiucca Canadenſis horti Farneſiani.
Bupthalmum novæ Hiſpaniæ Alepocapath.
Valeriana ſeu Chryſanthemum Americanum Acocotlis.
Flos Corvinus Coronarius Americanus.
Capolin Ceraſus dulcis Indicus Floribus racemoſis.
Aſphodelus Americanus.
Syringa Lutea Americana.
Bulbus unifolius.
Moly latifolium Flore luteo.
Conyza Americana purpurea.
Salvia Cretica pomifera Bellonii.
Lauſus Serrata Odora.
Ornithogalus Promontorii Bonæ Spei.
Fritallaria craſſa Soldanica Promontorii Bonæ Spei.
Sigillum Solomonis Indicum.
Tulipa Promontorii Bonæ Spei.
Iris Uvaria.
Nopolzoch ſedum elegans novæ Hiſpaniæ.

More might be added unto this Liſt; and I have only taken the pains to give you a ſhort Specimen of thoſe many more which you may find in reſpective Authours, and which time and future induſtry may make no great ſtrangers in *England*. The Inhabitants of *Nova Hiſpania*, and a great part of *America*, Mahometans, Indians, Chineſes, are eminent promoters of theſe coronary and ſpecious Plants; and the annual Tribute of the King of *Biſnagner* in *India*, ariſing out of Odours and Flowers, amounts unto many thouſands of Crowns.

Thus, in brief, of this matter. I am, &c.

TRACT

TRACT III.

OF THE
FISHES
Eaten by our
SAVIOUR
WITH HIS
DISCIPLES
After His
Resurrection from the Dead.

SIR,

I Have thought, a little, upon the Question propoſed by you [viz. *What kind of Fiſhes thoſe were, of which our Saviour ate with his Diſciples after his* * *reſurrection?*] and I return you ſuch an Anſwer, as, in ſo ſhort a time for ſtudy, and in the midſt of my occaſions, occurs to me. * S. Joh. 21. 9, 10, 11, 13.

The Books of Scripture (as alſo thoſe which are Apocryphal) are often ſilent, or very ſparing, in the particular Names of Fiſhes; or in ſetting them down in ſuch manner as to leave the kinds of them without all doubt and reaſon for farther inquiry. For, when it declareth what Fiſhes were allowed the Iſraelites for their Food, they are only ſet down in general which have Finns and Scales; whereas, in the account of *Quadrupeds* and Birds, there is particular mention made of divers of them. In the Book of *Tobit* that Fiſh which he took out of the River is only named a great Fiſh, and ſo there remains much uncertainty to determine the Species thereof. And even the Fiſh which ſwallowed *Jonah*, and is called a *great Fiſh*, and commonly thought to be a great Whale, is not received without all doubt; while ſome learned men conceive it to have been none of our Whales, but a large kind of *Lamia*.

And,

And, in this narration of S. *John*, the Fishes are only expressed by their Bigness and Number, not their Names, and therefore it may seem undeterminable what they were: notwithstanding, these Fishes being taken in the great Lake or Sea of *Tiberias*, something may be probably stated therein. For since *Bellonius*, that diligent and learned Traveller, informeth us, that the Fishes of this Lake were Trouts, Pikes, Chevins and Tenches; it may well be conceived that either all or some thereof are to be understood in this Scripture. And these kind of Fishes become large and of great growth, answerable unto the expression of Scripture, *One hundred fifty and three great Fishes*; that is, large in their own kinds, and the largest kinds in this Lake and fresh Water, wherein no great variety, and of the larger sort of Fishes, could be expected. For the River *Jordan*, running through this Lake, falls into the Lake of *Asphaltus*, and hath no mouth into the Sea, which might admit of great Fishes or greater variety to come up into it.

And out of the mouth of some of these forementioned Fishes might the *Tribute money* be taken, when our Saviour, at *Capernaum*, seated upon the same Lake, said unto *Peter*, *Go thou to the Sea, and cast an Hook, and take up the Fish that first cometh; and when thou hast opened his Mouth thou shalt find a piece of money; that take and give them for thee and me.*

And this makes void that common conceit and tradition of the Fish called *Faber marinus*, by some, a *Peter* or *Penny Fish*; which having two remarkable round spots upon either side, these are conceived to be the marks of S. *Peter*'s Fingers or signatures of the Money: for though it hath these marks, yet is there no probability that such a kind of Fish was to be found in the Lake of *Tiberias*, *Geneserah* or *Galilee*, which is but sixteen miles long and six broad, and hath no communication with the Sea; for this is a mere Fish of the Sea and Salt Water, and (though we meet with some thereof on our Coast) is not to be found in many Seas.

Thus having returned no improbable Answer unto your Question, I shall crave leave to ask another of your self concerning that Fish mention'd by * *Procopius*, which brought the famous King *Theodorick* to his end: his words are to this effect: "The manner of his Death was this; *Symmachus* and his "Son-in-Law *Boëthius*, just Men and great relievers of the Poor, Senatours "and Consuls, had many Enemies, by whose false accusations *Theodorick* "being perswaded that they plotted against him, put them to death, and "confiscated their Estates, Not long after his Waiters set before him at "Supper a great Head of a Fish, which seemed to him to be the Head of "*Symmachus* lately murthered; and with his Teeth sticking out, and fierce "glairing eyes to threaten him: being frighted, he grew chill, went to bed, "lamenting what he had done to *Symmachus* and *Boëthius*; and soon after "died. What Fish do you apprehend this to have been; I would learn of you; give me your thoughts about it.

* *De Bello Gothico, lib.* 1.

I am, &c.

TRACT

TRACT IV.

AN ANSWER To certain QUERIES Relating to Fishes, Birds, Insects.

SIR,

Return the following Answers to your Queries which were these,

[1. What Fishes are meant by the Names *Halec* and *Mugil*?

2. What is the Bird which you will receive from the Bearer; and what Birds are meant by the Names *Halcyon*, *Nysus*, *Ciris*, *Nycticorax*?

3. What Insect is meant by the word *Cicada*?]

Answer to Query 1.

The word *Halec* we are taught to render an *Herring*, which, being an ancient word, is not strictly appropriable unto a Fish not known or not described by the Ancients; and which the modern Naturalists are fain to name *Harengus*; the word *Halecula* being applied unto such little Fish out of which they were fain to make Pickle; and *Halec* or *Alec*, taken for the Liquamen or Liquor it self, according to that of the Poet,

—Ego facem primus & Alec
Primus & inveni piper album.—

And was a conditure and Sawce much affected by Antiquity, as was also *Muria* and *Garum*.

In common constructions, *Mugil* is rendred a *Mullet*, which, notwithstanding, is a different Fish from the *Mugil* described by Authours; wherein, if we mistake, we cannot so closely apprehend the expression of *Juvenal*,

— Quosdam

——*Quosdam ventres & Mugilis intrat.*

And misconceive the Fish, whereby Fornicatours were so opprobriously and irksomely punished; for the *Mugil* being somewhat rough and hard skinned, did more exasperate the gutts of such offenders: whereas the Mullet was a smooth Fish, and of too high esteem to be imployed in such offices.

Answer to Query 2. I cannot but wonder that this Bird you sent should be a stranger unto you, and unto those who had a sight thereof: for, though it be not seen every day, yet we often meet with it in this Country. It is an elegant Bird, which he that once beholdeth can hardly mistake any other for it. From the proper Note it is called an *Hoopebird* with us; in Greek *Epops*, in Latin *Upupa*. We are little obliged unto our School instruction, wherein we are taught to render *Upupa* a *Lapwing*, which Bird our natural Writers name *Vannellus*; for thereby we mistake this remarkable Bird, and apprehend not rightly what is delivered of it.

We apprehend not the Hieroglyphical considerations which the old Ægyptians made of this observable Bird; who considering therein the order and variety of Colours, the twenty six or twenty eight Feathers in its Crest, his latitancy, and mewing this handsome outside in the Winter; they made it an Emblem of the varieties of the World, the succession of Times and Seasons, and signal mutations in them. And therefore *Orus*, the Hieroglyphick of the World, had the Head of an Hoopebird upon the top of his Staff.

Levit. 11. 19. Hereby we may also mistake the *Duchiphath*, or Bird forbidden for Food in *Leviticus*; and, not knowing the Bird, may the less apprehend some reasons of that prohibition; that is, the magical virtues ascribed unto it by the Ægyptians, and the superstitious apprehensions which that Nation held of it, whilst they precisely numbred the Feathers and Colours thereof, while they placed it on the Heads of their Gods, and near their Mercurial Crosses, and so highly magnified this Bird in their sacred Symbols.

Again, not knowing or mistaking this Bird, we may misapprehend, or not closely apprehend, that handsome expression of *Ovid*, when *Tereus* was turned into an *Upupa*, or Hoopebird.

Vertitur in volucrem cui sunt pro vertice Cristæ,
Protinus immodicum surgit pro cuspide rostrum
Nomen Epops volucri, facies armata videtur.

For, in this military shape, he is aptly phancied even still revengefully to pursue his hated Wife *Progne*: in the propriety of his Note crying out, *Pou, Pou, ubi, ubi*, or *Where are you?*

Nor are we singly deceived in the nominal translation of this Bird: in many other Animals we commit the like mistake. So *Graculus* is rendred a *Jay*, which Bird notwithstanding must be of a dark colour according to that of *Martial*,

Sed quandam volo nocte nigriorem
Formica, pice, graculo, cicada.

* *See Vulg. Err. B. 3. c. 10.* * *Halcyon* is rendred a *King-fisher*, a Bird commonly known among us, and by Zoographers and Naturals the same is named *Ispida*, a well coloured Bird frequenting Streams and Rivers, building in holes of Pits, like some Martins, about the end of the Spring; in whose Nests we have found little else than innumerable small Fish Bones, and white round Eggs of a smooth and polished surface, whereas the true *Alcyon* is a Sea Bird, makes an handsome Nest floating upon the Water, and breedeth in the Winter.

That *Nysus* should be rendred either an *Hobby* or a *Sparrow Hawk*, in the Fable of *Nysus* and *Scylla* in *Ovid*, because we are much to seek in the distinction of Hawks according to their old denominations, we shall not much contend

contend, and may allow a favourable latitude therein: but that the *Ciris* or Bird into which *Scylla* was turned, ſhould be tranſlated a *Lark*, it can hardly be made out agreeable unto the deſcription of *Virgil* in his Poem of that name,

Inde alias volucres mimóque infecta rubenti
Crura——

But ſeems more agreeable unto ſome kind of *Hæmantopus* or Redſhank; and ſo the *Nyſus* to have been ſome kind of Hawk, which delighteth about the Sea and Mariſhes, where ſuch prey moſt aboundeth, which ſort of Hawk while *Scaliger* determineth to be a Merlin, the French Tranſlatour warily expoundeth it to be ſome kind of Hawk.

Nyctícorax we may leave unto the common and verbal tranſlation of a *Night Raven*, but we know no proper kind of Raven unto which to confine the ſame, and therefore ſome take the liberty to aſcribe it unto ſome ſort of Owls, and others unto the Bittern; which Bird in its common Note, which he uſeth out of the time of coupling and upon the Wing, ſo well reſembleth the croaking of a Raven that I have been deceived by it.

While *Cicada* is rendred a *Graſhopper*, we commonly think that which is ſo called among us to be the true *Cicada*; wherein, as we have elſewhere *declared, there is a great miſtake: for we have not the *Cicada* in *England*, and indeed no proper word for that Animal, which the French nameth *Cigale*. That which we commonly call a Graſhopper, and the French *Sauterelle* being one kind of Locuſt, ſo rendred in the Plague of *Egypt*, and, in old Saxon named *Gerſthop*. *Anſwer to Query 3.* * *Vulg. Err. B. 5. C. 3.*

I have been the leſs accurate in theſe Anſwers, becauſe the Queries are not of difficult Reſolution, or of great moment: however, I would not wholly neglect them or your ſatisfaction, as being, Sir,

Yours, &c.

TRACT V.

OF HAWKS AND FALCONRY, Ancient and Modern.

SIR,

IN vain you expect much information, *de Re Accipitraria*, of Falconry, Hawks or Hawking, from very ancient Greek or Latin Authours; that Art being either unknown or so little advanced among them, that it seems to have proceeded no higher than the daring of Birds: which makes so little thereof to be found in *Aristotle*, who only mentions some rude practice thereof in *Thracia*; as also in *Ælian*, who speaks something of Hawks and Crows among the Indians; little or nothing of true Falconry being mention'd before *Julius Firmicus*, in the days of *Constantius*, Son to *Constantine* the Great.

Yet if you consult the accounts of later Antiquity left by *Demetrius* the Greek, by *Symmachus* and *Theodotius*, and by *Albertus Magnus*, about five hundred years ago, you, who have been so long acquainted with this noble Recreation, may better compare the ancient and modern practice, and rightly observe how many things in that Art are added, varied, disused or retained in the practice of these days.

In the Diet of Hawks, they allowed of divers Meats which we should hardly commend. For beside the Flesh of Beef, they admitted of Goat, Hog, Deer, Whelp and Bear. And how you will approve the quantity and measure thereof, I make some doubt; while by weight they allowed half a pound of Beef, seven ounces of Swines Flesh, five of Hare, eight ounces of Whelp, as much of Deer, and ten ounces of He-Goats Flesh.

In the time of *Demetrius* they were not without the practice of Phlebotomy or Bleeding, which they used in the Thigh and Pounces; they plucked away the Feathers on the Thigh, and rubbed the part; but if the Vein appeared not in that part, they opened the Vein of the fore Talon.

In the days of *Albertus*, they made use of Cauteries in divers places: to advantage their sight they seared them under the inward angle of the eye; above the eye in distillations and diseases of the Head; in upward pains

pains they feared above the joint of the Wing, and at the bottom of the Foot, againſt the Gout; and the chief time for theſe cauteries they made to be the month of *March*.

In great coldneſs of Hawks they made uſe of Fomentations, ſome of the ſteam or vapour of artificial and natural Baths, ſome wrapt them up in hot Blankets, giving them Nettle Seeds and Butter.

No Clyſters are mention'd, nor can they be ſo profitably uſed; but they made uſe of many purging Medicines. They purged with Aloe, which, unto larger Hawks, they gave in the bigneſs of a Greek Bean; unto leſs, in the quantity of a *Cicer*, which notwithſtanding I ſhould rather give waſhed, and with a few drops of Oil of Almonds: for the Guts of flying Fowls are tender and eaſily ſcratched by it; and upon the uſe of Aloe both in Hawks and Cormorants I have ſometimes obſerved bloody excretions.

In phlegmatick cauſes they ſeldom omitted *Staveſaker*, but they purged ſometimes with a Mouſe, and the Food of boiled Chickens, ſometimes with good Oil and Honey.

They uſed alſo the Ink of Cuttle Fiſhes, with Smallage, Betony, Wine and Honey. They made uſe of ſtronger Medicines than preſent practice doth allow. For they were not afraid to give *Coccus Baphicus*; beating up eleven of its Grains unto a Lentor, which they made up into five Pills wrapt up with Honey and Pepper: and, in ſome of their old Medicines, we meet with Scammony and *Euphorbium*. Whether, in the tender Bowels of Birds, infuſions of Rhubarb, Agaric and Mechoachan, be not of ſafer uſe, as to take of Agary two Drachms, of Cinnamon half a Drachm, of Liquoriſh a Scruple, and, infuſing them in Wine, to expreſs a part into the mouth of the Hawk, may be conſidered by preſent practice.

Few Mineral Medicines were of inward uſe among them: yet ſometimes we obſerve they gave filings of Iron in the ſtraitneſs of the Cheſt, as alſo Lime in ſome of their pectoral Medicines.

But they commended Unguents of Quick-ſilver againſt the Scab: and I have ſafely given ſix or eight Grains of *Mercurius Dulcis* unto Keſtrils and Owls, as alſo crude and current Quick-ſilver, giving the next day ſmall Pellets of Silver or Lead till they came away uncoloured: and this, if any, may probably deſtroy that obſtinate Diſeaſe of the *Filander* or Back-worm.

A peculiar remedy they had againſt the Conſumption of Hawks. For, filling a Chicken with Vinegar, they cloſed up the Bill, and hanging it up untill the Fleſh grew tender, they fed the Hawk therewith: and to reſtore and well Fleſh them, they commonly gave them Hogs Fleſh, with Oil, Butter and Honey; and a decoction of Cumfory to bouze.

They diſallowed of ſalt Meats and Fat; but highly eſteemed of Mice in moſt indiſpoſitions; and in the falling Sickneſs had great eſteem of boiled Batts: and in many Diſeaſes, of the Fleſh of Owls which feed upon thoſe Animals. In Epilepſies they alſo gave the Brain of a Kid drawn thorough a gold Ring; and, in Convulſions, made uſe of a mixture of Musk and *Stercus humanum aridum*.

For the better preſervation of their Health they ſtrowed Mint and Sage about them; and for the ſpeedier mewing of their Feathers, they gave them the Slough of a Snake, or a Tortoiſe out of the Shell, or a green Lizard cut in pieces.

If a Hawk were unquiet, they hooded him, and placed him in a Smith's Shop for ſome time, where, accuſtomed to the continual noiſe of hammering, he became more gentle and tractable.

They uſed few terms of Art, plainly and intelligibly expreſſing the Parts affected, their Diſeaſes and Remedies. This heap of artificial terms firſt entring with the French Artiſts: who ſeem to have been the firſt and nobleſt Falconers in the Weſtern part of *Europe*; although, in their Language, they have no word which in general expreſſeth an Hawk.

They carried their Hawks in the left hand, and let them flie from the

right. They used a Bell, and took great care that their Jesses should not be red, lest Eagles should flie at them. Though they used Hoods, we have no clear description of them, and little account of their Lures.

The ancient Writers left no account of the swiftness of Hawks or measure of their flight: but * *Heresbachius* delivers, that *William* Duke of *Cleve* had an Hawk which, in one day, made a flight out of *Westphalia* into *Prussia*. And upon good account, an Hawk in this Country of *Norfolk* made a flight at a Woodcock near thirty miles in one hour. How far the Hawks, Merlins and wild Fowl which come unto us with a North-west wind in the Autumn, flie in a day, there is no clear account; but coming over Sea their flight hath been long, or very speedy. For I have known them to light so weary on the Coast, that many have been taken with Dogs, and some knock'd down with Staves and Stones.

* *De Re Rustica.*

Their Perches seem not so large as ours; for they made them of such a bigness that their Talons might almost meet: and they chose to make them of Sallow, Poplar or Lime Tree.

They used great calmours and hollowing in their flight, which they made by these words, *ou loi, la, là, la*; and to raise the Fowls, made use of the sound of a Cymbal.

Their recreation seemed more sober and solemn than ours at present, soi mproperly attended with Oaths and Imprecations. For they called on God at their setting out, according to the account of *Demetrius*, ἀ Θεὸν ἐπικαλούμενος; *in the first place calling upon God.*

The learned *Rigaltius* thinketh, that if the Romans had well known this airy Chase, they would have left or less regarded their Circensial Recreations. The Greeks understood Hunting early, but little or nothing of our Falconry. If *Alexander* had known it, we might have found something of it and more of Hawks in *Aristotle*; who was so unacquainted with that way, that he thought that Hawks would not feed upon the Heart of Birds. Though he hath mention'd divers Hawks, yet *Julius Scaliger*, an expert Falconer, despaired to reconcile them unto ours. And 'tis well if among them, you can clearly make out a Lanner, a Sparrow Hawk and a Kestril, but must not hope to find your Gier Falcon there, which is the noble Hawk; and I wish you one no worse than that of *Henry* King of *Navarre*; which, *Scaliger* saith, he saw strike down a Buzzard, two wild Geese, divers Kites, a Crane and a Swan.

Nor must you expect from high Antiquity the distinctions of Eyes and Ramage Hawks of Sores and Entermewers, of Hawks of the Lure and the Fist; nor that material distinction into short and long winged Hawks; from whence arise such differences in their taking down of Stones; in their flight, their striking down or seizing of their Prey, in the strength of their Talons, either in the Heel and fore-Talon, or the middle and the Heel: nor yet what Eggs produce the different Hawks, or when they lay three Eggs, that the first produceth a Female and large Hawk, the second of a midler sort, and the third a smaller Bird Tercellene or Tassel of the Masle Sex; which Hawks being onely observed abroad by the Ancients, were looked upon as Hawks of different kinds, and not of the same Eyrie or Nest. As for what *Aristotle* affirmeth, that Hawks and Birds of prey drink not; although you know that it will not strictly hold, yet I kept an Eagle two years, which fed upon Cats, Kittlings, Whelps and Ratts, without one drop of Water.

If any thing may add unto your knowledge in this noble Art, you must pick it out of later Writers than those you enquire of. You may peruse the two Books of Falconry writ by that renowned Emperour *Frederick* the Second; as also the Works of the noble Duke *Belisarius*, of *Tardiffe*, *Francherius*, of *Francisco Sforzino* of *Vicensa*; and may not a little inform or recreate your self with that elegant Poem of * *Thuanus*. I leave you to divert your self by the perusal of it, having, at present, no more to say but that I am, *&c.*

* *De Re Accipitraria*, in 3. Books

TRACT

TRACT VI.

OF

CYMBALS, &c.

SIR,

WITH what difficulty, if possibility, you may expect satisfaction concerning the Musick, or Musical Instruments of the Hebrews, you will easily discover if you consult the attempts of learned men upon that Subject: but for Cymbals, of whose Figure you enquire, you may find some described in *Bayfius*, in the Comment of *Rhodius* upon *Scribonius Largus*, and others.

As for Κύμβαλον ἀλαλάζον mentioned by S. * *Paul*, and rendred a *Tinkling Cymbal*, whether the translation be not too soft and diminutive, some question may be made: for the word ἀλαλάζον implieth no small sound, but a strained and lofty vociferation, or some kind of hollowing sound, according to the Exposition of *Hesychius*, Ἀλαλάξατε ἐυφώνατε τῷ φωνῷ. A word drawn from the lusty shout of Souldiers, crying Ἀλαλὰ at the first charge upon their Enemies, according to the custom of Eastern Nations, and used by Trojans in *Homer*; and is also the Note of the Chorus in *Aristophanes* Ἀλαλαὶ ἰὴ παιών. In other parts of Scripture we read of loud and high sounding Cymbals; and in *Clemens Alexandrinus*, that the Arabians made use of Cymbals in their Wars instead of other military Musick; and *Polyænus* in his *Stratagems* affirmeth that *Bacchus* gave the signal of Battel unto his numerous Army, not with Trumpets but with Tympans and Cymbals. * 1 Cor. 13. 1.

And now I take the opportunity to thank you for the new Book sent me containing the Anthems sung in our Cathedral and Collegiate Churches: 'tis probable there will be additions, the Masters of Musick being now active in that affair. Beside my naked thanks I have yet nothing to return you but this enclosed, which may be somewhat rare unto you, and that is a Turkish Hymn translated into French out of the Turkish Metre, which I thus render unto you.

O what praise doth he deserve, and how great is that Lord, all whose Slaves are as so many Kings!

Whosoever shall rub his Eyes with the dust of his Feet, shall behold such admirable things that he shall fall into an ecstasie.

He that shall drink one drop of his Beverage, shall have his Bosome like the Ocean filled with Gemms and pretious Liquors.

Let not loose the Reins unto thy Passions in this world: he that represseth them shall become a true Solomon *in the Faith.*

Amurat.

Amuſe not thy ſelf to adore Riches, nor to build great Houſes and Palaces.

The end of what thou ſhalt build is but ruine.

Pamper not thy Body with delicacies and dainties; it may come to paſs one day that this Body may be in Hell.

Imagine not that he who findeth Riches, findeth Happineſs; he that findeth Happineſs is he that findeth God.

*Vele *the Founder of the Convent.*

All who proſtrating themſelves in humility ſhall this day believe in * Vele, *if they were Poor, ſhall be Rich; and if Rich, ſhall become Kings.*

After the Sermon ended which was made upon a Verſe in the Alcoran containing much Morality, the *Deruices* in a Gallery apart ſung this Hymn, accompanied with Inſtrumental Muſick, which ſo affected the Ears of Monſieur *du Loyr*, that he would not omit to ſet it down, together with the Muſical Notes, to be found in his firſt Letter unto Monſieur *Boulian*, Prior of *Magny*.

Excuſe my brevity: I can ſay but little where I underſtand but little.

I am, &c.

TRACT

TRACT VII.

OF

ROPALIC

OR

Gradual Verſes, &c.

Mens mea ſublimes rationes præmeditatur.

SIR,

THough I may juſtly allow a good intention in this Poem preſented unto you, yet I muſt needs confeſs, I have no affection for it; as being utterly averſe from all affectation in Poetry, which either reſtrains the phancy, or fetters the invention to any ſtrict diſpoſure of words. A Poem of this nature is to be found in *Auſonius* beginning thus,

Spes Deus æternæ ſtationis conciliator.

Theſe are Verſes *Ropalici* or *Clavales*, ariſing gradually like the Knots in a Ῥοπάλη or Clubb; named alſo *Fiſtulares* by *Priſcianus*, as *Elias* * *Vinetus* hath noted. They conſiſt properly of five words, each thereof encreaſing by one ſyllable. They admit not of a *Spondee* in the fifth place, nor can a Golden or Silver Verſe be made this way. They run ſmoothly both in Latin and Greek, and ſome are ſcatteringly to be found in *Homer*; as,

* El. Vinet. in Auſon.

Ὦ μάκαρ Ἀτρεΐδη μοιρηγενὲς ὀλβιοδαῖμον,

Libere dicam ſed in aurem, ego verſibus hujuſmodi Ropalicis, longo ſyrmate protractis, Cerannium affigo.

He that affecteth ſuch reſtrained Poetry, may peruſe the Long Poem of *Hugbaldus* the Monk, wherein every word beginneth with a C penned in the praiſe of *Calvities* or Baldneſs, to the honour of *Carolus Calvus* King of *France*,

Carmina clariſone calvis cantate Camænæ.

The

The reſt may be ſeen at large in the *adverſaria* of *Barthius*: or if he delighteth in odd contrived phancies, may he pleaſe himſelf with *Antiſtrophes, Counterpetories, Retrogrades, Rebuſſes, Leonine* Verſes, *&c.* to be found in *Sieur des Accords*. But theſe and the like are to be look'd upon, not purſued, odd works might be made by ſuch ways; and for your recreation I propoſe theſe few lines unto you,

Arcu paratur quod arcui ſufficit.

Miſellorum clamoribus accurrere non tam humanum quam ſulphureum eſt.
Aſino teratur quæ Aſino teritur.

Ne Aſphodelos comedas, phœnices manduca.
Cœlum aliquid poteſt, ſed quæ mira præſtat Papilio eſt.

* Not to put you unto endleſs amuſement, the Key hereof is the homonomy of the Greek made uſe of in the Latin words, which rendreth all plain. More ænigmatical and dark expreſſions might be made if any one would ſpeak or compoſe them out of the numerical Characters or characteriſtical Numbers ſet down by * *Robertus de Fluctibus.*

* *Tract 2. Part lib. 1.*

As for your queſtion concerning the contrary expreſſions of the Italian and Spaniards in their common affirmative anſwers, the Spaniard anſwering *cy Sennor*, the Italian *Signior cy*, you muſt be content with this Diſtich,

Why ſaith the Italian Signior cy, the Spaniard cy Sennor;
Becauſe the one puts that behind, the other puts before.

And becauſe you are ſo happy in ſome Tranſlations, I pray return me theſe two Verſes in Engliſh,

Occidit heu tandem multos quæ occidit amantes,
Et cinis eſt hodie quæ fuit ignis heri.

My occaſions make me to take off my Pen. I am, *&c.*

TRACT

TRACT VIII.

OF

LANGUAGES,

And particularly of the

SAXON TONGUE.

SIR,

THE laſt Diſcourſe we had of the Saxon Tongue, recalled to my mind ſome forgotten conſiderations. Though the Earth were widely peopled before the Flood, (as many learned men conceive) yet whether after a large diſperſion, and the ſpace of ſixteen hundred years, men maintained ſo uniform a Language in all parts, as to be ſtrictly of one Tongue, and readily to underſtand each other, may very well be doubted. For though the World preſerved in the Family of *Noah* before the confuſion of Tongues might be ſaid to be of one Lip, yet even permitted to themſelves their humours, inventions, neceſſities, and new objects, without the miracle of Confuſion at firſt in ſo long a tract of time, there had probably been a *Babel*. For whether *America* were firſt peopled by one or ſeveral Nations, yet cannot that number of different planting Nations, anſwer the multiplicity of their preſent different Languages, of no affinity unto each other; and even in their Northern Nations and incommunicating Angles, their Languages are widely differing. A native Interpreter brought from *California* proved of no uſe unto the Spaniards upon the neighbour Shore. From *Chiapa*, to *Guatemala*, *S. Salvador*, *Honduras*, there are at leaſt eighteen ſeveral Languages; and ſo numerous are they both in the Peruvian and Mexican Regions, that the great Princes are fain to have one common Language, which beſides their vernaculous and Mother Tongues, may ſerve for commerce between them.

And ſince the confuſion of Tongues at firſt fell onely upon thoſe which were preſent in *Sinaar* at the work of *Babel*, whether the primitive Language from *Noah* were onely preſerved in the Family of *Heber*, and not alſo in divers others, which might be abſent at the ſame, whether all came away, and many might not be left behind in their firſt Plantations about the foot of the Hills, whereabout the Ark reſted, and *Noah* became an Husbandman, is not abſurdly doubted.

For ſo the primitive Tongue might in time branch out into ſeveral parts of *Europe* and *Aſia*, and thereby the firſt or Hebrew Tongue which

ſeems to be ingredient into ſo many Languages, might have larger originals and grounds of its communication and traduction than from the Family of *Abraham*, the Country of *Canaan*, and words contained in the Bible which come ſhort of the full of that Language. And this would become more probable from the Septuagint or Greek Chronology ſtrenuouſly aſſerted by *Voſſius*; for making five hundred years between the Deluge and the days of *Peleg*, there ariſeth a large latitude of multiplication and diſperſion of People into ſeveral parts, before the deſcent of that Body which followed *Nimrod* unto *Sinaar* from the Eaſt.

They who derive the bulk of European Tongues from the Scythian and the Greek, though they may ſpeak probably in many points, yet muſt needs allow vaſt difference or corruptions from ſo few originals, which however might be tolerably made out in the old Saxon, yet hath time much confounded the clearer derivations. And as the knowledge thereof now ſtands in reference unto our ſelves, I find many words totally loſt, divers of harſh ſound diſuſed or refined in the pronunciation, and many words we have alſo in common uſe not to be found in that Tongue, or venially derivable from any other from whence we have largely borrowed, and yet ſo much ſtill remaineth with us that it maketh the groſs of our Language.

The religious obligation unto the Hebrew Language hath ſo notably continued the ſame, that it might ſtill be underſtood by *Abraham*, whereas by the *Mazorite* Points and Chaldee Character the old Letter ſtands ſo transformed, that if *Moſes* were alive again, he muſt be taught to read his own Law.

The Chinoys, who live at the bounds of the Earth, who have admitted little communication, and ſuffered ſucceſſive incurſions from one Nation, may poſſibly give account of a very ancient Language; but conſiſting of many Nations and Tongues; confuſion, admixtion and corruption in length of time might probably ſo have crept in as without the virtue of a common Character, and laſting Letter of things, they could never probably make out thoſe ſtrange memorials which they pretend, while they ſtill make uſe of the Works of their great *Confutius* many hundred years before Chriſt, and in a ſeries aſcend as high as *Poncuus*, who is conceived our *Noah*.

The preſent Welch, and remnant of the old Britanes, hold ſo much of that ancient Language, that they make a ſhift to underſtand the Poems of *Merlin*, *Enerin*, *Teleſin*, a thouſand years ago, whereas the Herulian *Pater Noſter*, ſet down by *Wolfgangus Lazius*, is not without much criticiſm made out, and but in ſome words; and the preſent Pariſians can hardly hack out thoſe few lines of the League between *Charles* and *Lewis*, the Sons of *Ludovicus Pius*, yet remaining in old French.

The Spaniards, in their corruptive traduction and Romance, have ſo happily retained the terminations from the Latin, that notwithſtanding the Gothick and Mooriſh intruſion of words, they are able to make a Diſcourſe completely conſiſting of Grammatical Latin and Spaniſh, wherein the Italians and French will be very much to ſeek.

The learned *Caſaubon* conceiveth that a Dialogue might be compoſed in Saxon only of ſuch words as are derivable from the Greek, which ſurely might be effected, and ſo as the learned might not uneaſily find it out. *Verſtegan* made no doubt that he could contrive a Letter which might be underſtood by the Engliſh, Dutch and Eaſt Friſlander, which, as the preſent confuſion ſtandeth, might have proved no very clear Piece, and hardly to be hammer'd out: yet ſo much of the Saxon ſtill remaineth in our Engliſh, as may admit an orderly diſcourſe and ſeries of good ſenſe, ſuch as not only the preſent Engliſh, but *Ælfric*, *Bede* and *Alured* might underſtand after ſo many hundred years.

Nations that live promiſcuouſly, under the Power and Laws of Conqueſt, do ſeldom eſcape the loſs of their Language with their Liberties, wherein the Romans were ſo ſtrict that the Grecians were fain to conform in their judicial Proceſſes; which made the Jews loſe more in ſeventy years diſperſion in the Provinces of *Babylon*, than in many hundred in their diſtinct habitation in *Ægypt*; and the Engliſh which dwelt diſperſedly

to

to loſe their Language in *Ireland*, whereas more tolerable reliques there are thereof in *Fingall*, where they were cloſely and almoſt ſolely planted; and the Moors which were moſt huddled together and united about *Granada*, have yet left their *Arvirage* among the Granadian Spaniards.

But ſhut up in Angles and inacceſſible corners, divided by Laws and Manners, they often continue long with little mixture, which hath afforded that laſting life unto the Cantabrian and Britiſh Tongue, wherein the Britanes are remarkable, who, having lived four hundred years together with the *Romans*, retained ſo much of the Britiſh as it may be eſteemed a Language; which either they reſolutely maintained in their cohabitation with them in *Britane*, or retiring after in the time of the Saxons into Countries and parts leſs civiliz'd and converſant with the *Romans*, they found the People diſtinct, the Language more intire, and ſo fell into it again.

But ſurely no Languages have been ſo ſtraitly lock'd up as not to admit of commixture. The Iriſh, although they retain a kind of a Saxon Character, yet have admitted many words of Latin and Engliſh. In the Welch are found many words from Latin, ſome from Greek and Saxon. In what parity and incommixture the Language of that People ſtood which were caſually diſcovered in the heart of *Spain*, between the Mountains of *Caſtile*, no longer ago than in the time of Duke *D' Alva*, we have not met with a good account any farther than that their words were Baſquiſh or Cantabrian: but the preſent Baſquenſa one of the minor Mother Tongues of *Europe*, is not without commixture of Latin and Caſtilian, while we meet with *Santifica*, *tentationeten*, *Glaria*, *puiſſanea*, and four more in the ſhort Form of the Lord's Prayer, ſet down by *Paulus Merula*: but although in this brief Form we may find ſuch commixture, yet the bulk of their Language ſeems more diſtinct, conſiſting of words of no affinity unto others, of numerals totally different, of differing Grammatical Rule, as may be obſerved in the Dictionary and ſhort *Baſquenſa* Grammar, compoſed by *Raphael Nicoleta*, a Prieſt of *Bilboa*.

And if they uſe the auxiliary Verbs of *Equin* and *Yſan*, anſwerable unto *Hazer* and *Ser*, to Have, and Be, in the Spaniſh, which Forms came in with the Northern Nations into the Italian, Spaniſh and French, and if that Form were uſed by them before, and crept not in from imitation of their neighbours, it may ſhew ſome ancienter traduction from Northern Nations, or elſe muſt ſeem very ſtrange; ſince the Southern Nations had it not of old, and I know not whether any ſuch mode be found in the Languages of any part of *America*.

The Romans, who made the great commixture and alteration of Languages in the World, effected the ſame, not only by their proper Language, but thoſe alſo of their military Forces, employed in ſeveral Provinces, as holding a ſtanding *Militia* in all Countries, and commonly of ſtrange Nations; ſo while the cohorts and Forces of the Britanes were quartered in *Ægypt*, *Armenia*, *Spain*, *Illyria*, *&c.* the Stablæſians and Dalmatians here, the Gauls, Spaniards and Germans in other Countries, and other Nations in theirs, they could not but leave many words behind them, and carry away many with them, which might make that in many words of very diſtinct Nations ſome may ſtill remain of very unknown and doubtfull Genealogy.

And if, as the learned *Buxhornius* contendeth, the Scythian Language as the Mother Tongue runs through the Nations of *Europe*, and even as far as *Perſia*, the community in many words between ſo many Nations, hath a more reaſonable original traduction, and were rather derivable from the common Tongue diffuſed through them all, than from any particular Nation, which hath alſo borrowed and holdeth but at ſecond hand.

The Saxons ſettling over all *England*, maintained an uniform Language, only diverſified in Dialect, Idioms, and minor differences, according to their different Nations which came in to the common Conqueſt, which may yet be a cauſe of the variation in the ſpeech and words of ſeveral parts of *England*, where different Nations moſt abode or ſettled, and having expelled the Britanes, their Wars were chiefly among themſelves,

with little action with foreign Nations untill the union of the Heptarchy under *Egbert*: after which time although the Danes infeſted this Land, and ſcarce left any part free; yet their incurſions made more havock in Buildings, Churches and Cities, than the Language of the Country, becauſe their Language was in effect the ſame, and ſuch as whereby they might eaſily underſtand one another.

And if the Normans, which came into *Neuſtria* or *Normandy* with *Rollo* the Dane, had preſerved their Language in their new acquiſts, the ſucceeding Conqueſt of *England*, by Duke *William* of his race, had not begot among us ſuch notable alterations; but having loſt their Language in their abode in *Normandy* before they adventured upon *England*, they confounded the Engliſh with their French, and made the grand mutation, which was ſucceſſively encreaſed by our poſſeſſions in *Normandy*, *Guien* and *Aquitain*, by our long Wars in *France*, by frequent reſort of the French, who to the number of ſome thouſands came over with *Iſabel* Queen to *Edward* the Second, and the ſeveral Matches of *England* with the Daughters of *France* before and ſince that time.

But this commixture, though ſufficient to confuſe, proved not of ability to aboliſh the Saxon words; for from the French we have borrowed many Subſtantives, Adjectives and ſome Verbs, but the great Body of Numerals, auxiliary Verbs, Articles, Pronouns, Adverbs, Conjunctions and Prepoſitions, which are the diſtinguiſhing and laſting part of a Language, remain with us from the Saxon, which, having ſuffered no great alteration for many hundred years, may probably ſtill remain, though the Engliſh ſwell with the inmates of Italian, French and Latin. An example whereof may be obſerv'd in this following,

ENGLISH I.

The firſt and formoſt ſtep to all good Works is the dread and fear of the Lord of Heaven and Earth, which thorough the Holy Ghoſt enlightneth the blindneſs of our ſinfull hearts to tread the ways of wiſedom, and leads our feet into the Land of Bleſſing.

SAXON I.

The erſt and fyrmoſt ſteep to eal gode Weorka is the dreed and feurt of the Lauord of Heofan and Eorth, whilc thurh the Heilig Gaſt onlihtneth the blindneſſe of ure ſinfull heorte to træd the wæg of wiſdome, and thone læd ure fet into the Land of Bleſſung.

ENGLISH II.

For to forget his Law is the Door, the Gate and Key to let in all unrighteouſneſs, making our Eyes, Ears and Mouths to anſwer the luſt of Sin, our Brains dull to good Thoughts, our Lips dumb to his Praiſe, our Ears deaf to his Goſpel, and our Eyes dim to behold his Wonders, which witneſs againſt us that we have not well learned the word of God, that we are the Children of wrath, unworthy of the love and manifold gifts of God, greedily following after the ways of the Devil and witchcraft of the World, doing nothing to free and keep our ſelves from the burning fire of Hell, till we be buried in Sin and ſwallowed in Death, not to ariſe again in any hope of Chriſt's Kingdom.

SAXON II.

For to fuorgytan his Laga is the Dure, the Gat and Cæg to let in eal unrightwiſnyſſe, makend ure Eyge, Eore and Muth to anſware the luſt of Sin, ure Brægan dole to gode Theoht, ure Lippan dumb to his Preys, ure Earen deaf to his Goſpel, and ure Eyge dim to behealden his Wundra,

whilc

whilc ge witnyſſe ongen us that wee œf noht wel gelæred the weord of God, that wee are the Cilda of ured, unwyrthe of the luſe and mænigfeald gift of God, grediglice felygend æfter the wægen of the Deoful and wiccraft of the Weorld, doend nothing to fry and cæp ure ſaula from the byrnend fyr of Hell, till we be geburied in Synne and ſwolgen in Death, not to ariſe agen in ænig hope of Chriſtes Kynedome.

ENGLISH III.

Which draw from above the bitter doom of the Almighty, of Hunger, Sword, Sickneſs, and brings more ſad plagues than thoſe of Hail, Storms, Thunder, Bloud, Frogs, ſwarms of Gnats and Graſhoppers, which ate the Corn, Graſs and Leaves of the Trees in *Ægypt*.

SAXON III.

Whilc drag from buf the bitter dome of the Almagan of Hunger, Sweorde, Seokneſſe, and bring mere ſad plag, thone they of Hagal, Storme, Thunner, Blode, Frog, ſwearme of Gnæt and Gærſupper, whilc eaten the Corn, Gærs and Leaf of the Treowen in *Ægypt*.

ENGLISH IV.

If we read his Book and holy Writ, theſe among many others, we ſhall find to be the tokens of his hate, which gathered together might mind us of his will, and teach us when his wrath beginneth, which ſometimes comes in open ſtrength and full ſail, oft ſteals like a Thief in the night, like Shafts ſhot from a Bow at midnight, before we think upon them.

SAXON IV.

Gyf we ræd his Boc and heilig Gewrit, theſe gemong mænig othern, we ſceall findan the tacna of his hatung, whilc gegatherod together miht gemind us of his willan, and teac us whone his ured onginneth, whilc ſometima come in open ſtrength and fill ſeyle, oft ſtæl gelyc a Theof in the niht, gelyc Sceaft ſcoten frama Boge at midneoht, beforean we thinck uppen them.

ENGLISH V.

And though they were a deal leſs, and rather ſhort than beyond our ſins, yet do we not a whit withſtand or forbear them, we are wedded to, not weary of our miſdeed, we ſeldom look upward, and are not aſhamed under ſin; we cleanſe not our ſelves from the blackneſs and deep hue of our guilt; we want tears and ſorrow, we weep not, faſt not, we crave not forgiveneſs from the mildneſs, ſweetneſs and goodneſs of God, and with all livelihood and ſtedfaſtneſs to our uttermoſt will hunt after the evil of guile, pride, curſing, ſwearing, drunkenneſs, over-eating, uncleanneſs, all idle luſt of the fleſh, yes many uncouth and nameleſs ſins, hid in our inmoſt Breaſt and Boſomes, which ſtand betwixt our forgiveneſs, and keep God and Man aſunder.

SAXON V.

And theow they wære a dælleſſe, and reither ſcort thone begond oure ſinnan, get do we naht a whit withſtand and forbeare them, we eare bewudded to, noht werig of ure agen miſdeed, we ſeldon loc upweard, and ear not ofſchæmod under ſinne, we cleans noht ure ſelvan from the blacneſſe and dæp hue of ure guilt; we wan teare and ſara, we weope noht, fæſt noht, we craft noht foregyfneſſe fram the mildneſſe, ſweetneſſe and goodneſſe of God,

God, and mit eal lifelyhood and ſtedfáſtneſs to ure uttermoſt witt hunt æfter the uſel of guile, pride, curſung, ſwearung, druncenneſſe, overeat, uncleanneſſe and eal idle luſt of the flæſc, yis mænig uncuth and nameleas ſinnan, hid in ure inmæſt Briſt and Boſome whilc ſtand betwixt ure foregyſneſſe, and cæp God and Man aſynder.

ENGLISH VI.

Thus are we far beneath and alſo worſe than the reſt of God's Works; for the Sun and Moon, the King and Queen of Stars, Snow, Ice, Rain, Froſt, Dew, Miſt, Wind, fourfooted and creeping things, Fiſhes and feathered Birds, and Fowls either of Sea or Land do all hold the Laws of his will.

SAXON VI.

Thus eare we far beneoth and ealſo wyrſe thone the reſt of Gods Weorka; for the Sun and Mone, the Cyng and Cquen of Stearran, Snaw, Iſe, Ren, Froſt, Deaw, Miſte, Wind, feower fet and crypend dinga, Fix yefetherod Brid, and Fælan auther in Sæ or Land do eal heold the Lag of his willan.

Thus have you ſeen in few words how near the Saxon and Engliſh meet.

Now of this account the French will be able to make nothing; the modern Danes and Germans, though from ſeveral words they may conjecture at the meaning, yet will they be much to ſeek in the orderly ſenſe and continued conſtruction thereof, whether the Danes can continue ſuch a ſeries of ſenſe out of their preſent Language and the old Runick, as to be intelligible unto preſent and ancient times, ſome doubt may well be made; and if the preſent French would attempt a Diſcourſe in words common unto their preſent Tongue and the old *Romana Ruſtica* ſpoken in Elder times, or in the old Language of the Francks, which came to be in uſe ſome ſucceſſions after *Pharamond*, it might prove a Work of ſome trouble to effect.

It were not impoſſible to make an Original reduction of many words of no general reception in *England*, but of common uſe in *Norfolk*, or peculiar to the Eaſt Angle Countries; as, *Bawnd*, *Bunny*, *Thurck*, *Enemmis*, *Sammodithee*, *Mawther*, *Kedge*, *Seele*, *Straft*, *Clever*, *Matchly*, *Dere*, *Nicked*, *Stingy*, *Noneare*, *Feft*, *Thepes*, *Goſgood*, *Kamp*, *Sibrit*, *Fangaſt*, *Sap*, *Cothiſh*, *Thokiſh*, *Bide owe*, *Paxwax*: of theſe and ſome others of no eaſie originals, when time will permit, the reſolution may be attempted; which to effect, the Daniſh Language new and more ancient may prove of good advantage: which Nation remained here fifty years upon agreement, and have left many Families in it, and the Language of theſe parts had ſurely been more commixed and perplex, if the Fleet of *Hugo de Bones* had not been caſt away, wherein threeſcore thouſand Souldiers out of *Britany* and *Flanders* were to be wafted over, and were by King *John*'s appointment to have a ſettled habitation in the Counties of *Norfolk* and *Suffolk*.

But beſide your laudable endeavours in the Saxon, you are not like to repent you of your ſtudies in the other European, and Weſtern Languages, for therein are delivered many excellent Hiſtorical, Moral and Philoſophical Diſcourſes, wherein Men merely verſed in the learned Languages are often at a loſs: but although you are ſo well accompliſhed in the French, you will not ſurely conceive that you are maſter of all the Languages in *France*, for to omit the Briton, Britonant or old Britiſh, yet retained in ſome part of *Britany*, I ſhall only propoſe this unto your conſtruction.

Chavaliſco d'aqueſtes Boemes chems an freitado lou cap cun taules Jargonades, ero necy chi voluiget bouta ſin tens embè aquelles. Anin à lous occells, che dizen tat prouben en ein voz L' ome noſap comochodochi yen ay jes de plazer, d' auſir la mitat de paraulles, en el mon.

This

This is a part of that Language which *Scaliger* nameth *Idiotiſmus Tectoſagicus*, or *Langue d'oc*, counterdiſtinguiſhing it unto the *Idiotiſmus Francicus*, or *Langue d'ouy*, not underſtood in a petty corner or between a few Mountains, but in parts of early civility, in *Languedoc*, *Provence* and *Catalonia*, which put together will make little leſs than *England*.

Without ſome knowledge herein you cannot exactly underſtand the Works of *Rablais*: by this the French themſelves are fain to make out that preſerved relique of old French, containing the League between *Charles* and *Lewis*, the Sons of *Ludovicus Pius*. Hereby may tolerably be underſtood the ſeveral Tracts, written in the Catalonian Tongue; and in this is publiſhed the Tract of Falconry written by *Theodoſius* and *Symmachus*: in this is yet conſerved the Poem *Vilhuardine* concerning the French expedition in the Holy War, and the taking of *Conſtantinople*, among the Works of *Marius Æquicola* an Italian Poet. You may find, in this Language, a pleaſant Dialogue of Love: this, about an hundred years ago, was in high eſteem, when many Italian Wits flocked into *Provence*; and the famous *Petrarcha* wrote many of his Poems in *Vaucluſe* in that Country.

For the word [*Dread*] in the Royal Title [*Dread Sovereign*] of which you deſire to know the meaning, I return anſwer unto your queſtion briefly thus.

Moſt men do vulgarly underſtand this word *Dread* after the common and Engliſh acception, as implying *Fear*, *Awe*, or *Dread*.

Others may think to expound it from the French word *Droit* or *Droyt*. For, whereas in elder times, the *Preſidents* and *Supremes* of Courts were termed *Sovereigns*, men might conceive this a diſtinctive Title and proper unto the King as eminently and by right the Sovereign.

A third expoſition may be made from ſome Saxon Original, particularly from *Driht*, *Domine*, or *Drihten*, *Dominus*, in the Saxon Language, the word for *Dominus* throughout the Saxon Pſalms, and uſed in the expreſſion of the year of our Lord in the Decretal Epiſtle of Pope *Agatho* unto *Athelred* King of the Mercians, *Anno* 680.

Verſtegan would have this term *Drihten* appropriate unto God. Yet, in the Conſtitutions of * *Withred* King of *Kent*, we find the ſame word uſed for a Lord or Maſter, *Si in veſperâ præcedente ſolem ſervus ex mandato Domini aliquod opus ſervile egerit, Dominus* (*Drihten*) 80 *ſolidis luito*. However therefore, though *Driht*, *Domine*, might be moſt eminently applied unto the Lord of Heaven, yet might it be alſo transferred unto Potentates and Gods on Earth, unto whom fealty is given or due, according unto the Feudiſt term *Ligeus à Ligando* unto whom they were bound in fealty. And therefore from *Driht*, *Domine*, *Dread Sovereign*, may, probably, owe its Original.

* V. Cl. Spelmanni *Concil.*

I have not time to enlarge upon this Subject: 'Pray let this paſs, as it is, for a Letter and not for a Treatiſe. I am

Yours, &c.

TRACT

TRACT IX.

OF ARTIFICIAL

HILLS,

MOUNTS or BURROWS,

In many parts of

ENGLAND:

What they are, to what end raiſed, and by what Nations.

My Honoured Friend Mr. *E. D.* his *Quare.*

IN my laſt Summer's Journey through Marſhland, Holland *and a great part of the* Fenns, *I obſerved divers artificial heaps of Earth of a very large magnitude, and I hear of many others which are in other parts of thoſe Countries, ſome of them are at leaſt twenty foot in direct height from the level whereon they ſtand. I would gladly know your opinion of them, and whether you think not that they were raiſed by the* Romans *or Saxons, to cover the Bones or Aſhes of ſome eminent perſons?*

My Anſwer.

Worthy Sir,

CONcerning artificial Mounts and Hills, raiſed without Fortifications attending them, in moſt parts of *England*, the moſt conſiderable thereof I conceive to be of two kinds; that is, either ſignal Boundaries and Land-Marks, or elſe ſepulchral Monuments or Hills of Interrment for remarkable and eminent perſons, eſpecially ſuch as died in the Wars.

As

As for such which are sepulchral Monuments, upon bare and naked view they are not appropriable unto any of the three Nations of the Romans, Saxons or Danes, who, after the Britaines, have possessed this Land; because upon strict account, they may be appliable unto them all.

For that the *Romans* used such hilly Sepultures, beside many other testimonies, seems confirmable from the practice of *Germanicus*, who thus interred the unburied Bones of the slain Souldiers of *Varus*; and that expression of *Virgil*, of high antiquity among the Latins,

——facit ingens monte sub alto
Regis Dercenni terreno ex aggere Bustum.

That the Saxons made use of this way is collectible from several Records, and that pertinent expression of * *Lelandus*, *Saxones gens Christi ignara, in hortis amanis, si domi forte ægroti moriebantur; sin foris & bello occisi, in egestis per campos terræ tumulis, quos (Burgos appellabant) sepulti sunt.*

* Leland. *in Assertione Regis Arthuri.*

That the Danes observed this practice, their own Antiquities do frequently confirm, and it stands precisely delivered by *Adolphus Cyprius*, as the learned † *Wormius* hath observed. *Dani olim in memoriam Regum & Heroum, ex terra coacervata ingentes moles, Montium instar eminentes, erexisse, credibile omnino ac probabile est, atque illis in locis ut plurimum, quo sæpe homines commearent, atque iter haberent, ut in viis publicis posteritati memoriam consecrarent, & quodammodo immortalitati mandarent.* And the like Monuments are yet to be observed in *Norway* and *Denmark* in no small numbers.

† Wormius *in Monumentis Danicis.*

So that upon a single view and outward observation they may be the Monuments of any of these three Nations: Although the greatest number, not improbably, of the Saxons; who fought many Battels with the Britaines and Danes, and also between their own Nations, and left the proper name of Burrows for these Hills still retained in many of them, as the seven Burrows upon *Salisbury* Plain, and in many other parts of *England*.

But of these and the like Hills there can be no clear and assured decision without an ocular exploration, and subterraneous enquiry by cutting through one of them either directly or cross-wise. For so with lesser charge discovery may be made what is under them, and consequently the intention of their erection.

For if they were raised for remarkable and eminent Boundaries, then about their bottom will be found the lasting substances of burnt Bones of Beasts, of Ashes, Bricks, Lime or Coals.

If Urns be found, they might be erected by the *Romans* before the term of Urn-burying or custom of burning the dead expired: but if raised by the *Romans* after that period; Inscriptions, Swords, Shields and Arms after the *Roman* mode, may afford a good distinction.

But if these Hills were made by Saxons or Danes, discovery may be made from the fashion of their Arms, Bones of their Horses, and other distinguishing substances buried with them.

And for such an attempt there wanteth not encouragement. For a like Mount or Burrow was opened in the days of King *Henry* the Eighth upon *Barham* Down in *Kent*, by the care of Mr. *Thomas Digges* and charge of Sir *Christopher Hales*; and a large Urn with Ashes was found under it, as is delivered by *Thomas Twinus De Rebus Albionicis*, a learned Man of that Country, *Sub incredibili Terræ acervo, Urna cinere ossium magnorum fragmentis plena, cum galeis, clypeis æneis & ferreis rubigine ferè consumptis, inusitatæ magnitudinis, eruta est: sed nulla inscriptio nomen, nullum testimonium tempus, aut fortunam exponebant:* and not very long ago, as * *Camden* delivereth, in one of the Mounts of *Barklow* Hills in *Essex*, being levelled there were found three Troughs, containing broken Bones, conceived to have been of Danes: and in later time we find, that a Burrow was opened in the Isle of *Man*, wherein fourteen Urns were found with burnt Bones in them; and one more neat than the rest, placed in a Bed of fine white Sand, containing nothing but a few brittle Bones, as having passed the Fire; according to the

* Camd. Brit p. 3: 6.

* *Published 1656. by Dan. King.*

particular account thereof in the * deſcription of the Iſle of *Man*. Surely many noble Bones and Aſhes have been contented with ſuch hilly Tombs; which neither admitting Ornament, Epitaph or Inſcription, may, if Earthquakes ſpare them, out-laſt all other Monuments. *Suæ ſunt Metis metæ.* Obelisks have their term, and Pyramids will tumble, but theſe mountainous Monuments may ſtand, and are like to have the ſame period with the Earth.

More might be ſaid, but my buſineſs of another nature, makes me take off my hand. I am

Yours, &c.

TRACT

TRACT X.

OF

TROAS,

What place is meant by that Name.

Alſo, of the ſituations of *Sodom*, *Gomorrha*, *Admah*, *Zeboim*, in the dead Sea.

SIR,

To your Geographical Queries, I anſwer as follows.

IN ſundry paſſages of the new Teſtament, in the *Acts of the Apoſtles*, and Epiſtles of S. *Paul*, we meet with the word *Troas*; how he went from *Troas* to *Philippi* in *Macedonia*, from thence unto *Troas* again: how he remained ſeven days in that place: from thence on foot to *Aſſos*, whither the Diſciples had ſailed from *Troas*, and there, taking him in, made their Voyage unto *Caſarea*.

Now, whether this *Troas* be the name of a City or a Certain Region ſeems no groundleſs doubt of yours: for that 'twas ſometimes taken in the ſignification of ſome Country, is acknowledged by *Ortelius*, *Stephanus* and *Grotius*; and it is plainly ſet down by *Strabo*, that a Region of *Phrygia* in *Aſia minor* was ſo taken in ancient times; and that at the Trojan War, all the Territory which comprehended the nine Principalities ſubject unto the King of *Ilium* Τρῳὰς λεγομένη, was called by the name of *Troja*. And this might ſeem ſufficiently to ſalve the intention of the deſcription, when he came or went from *Troas*, that is, ſome part of that Region; and will otherwiſe ſeem ſtrange unto many how he ſhould be ſaid to go or come from that City which all Writers had laid in the Aſhes about a thouſand years before.

All which notwithſtanding, ſince we read in the Text a particular abode of ſeven days, and ſuch particulars as leaving of his Cloak, Books and Parchments at *Troas*: And that S. *Luke* ſeems to have been taken in to the Travels of S. *Paul* in this place, where he begins in the *Acts* to write in the firſt perſon, this may rather ſeem to have been ſome City or ſpecial Habitation, than any Province or Region without ſuch limitation.

Now that ſuch a City there was, and that of no mean note, is eaſily verified from hiſtorical obſervation. For though old *Ilium* was anciently

deſtroyed, yet was there another raiſed by the relicts of that people, not in the ſame place, but about thirty Furlongs weſtward, as is to be learned from *Strabo*.

Of this place *Alexander* in his Expedition againſt *Darius* took eſpecial notice, endowing it with ſundry Immunities, with promiſe of greater matters, at his return from *Perſia*; inclined hereunto from the honour he bore unto *Homer*, whoſe earneſt Reader he was, and upon whoſe Poems, by the help of *Anaxarchus* and *Calliſthenes*, he made ſome obſervations. As alſo much moved hereto upon the account of his cognation with the *Æacides* and Kings of *Moloſſus*, whereof *Andromache* the Wife of *Hector* was Queen. After the death of *Alexander*, *Lyſimachus* ſurrounded it with a Wall, and brought the inhabitants of the neighbour Towns unto it, and ſo it bore the name of *Alexandria*; which, from *Antigonus*, was alſo called *Antigonia*, according to the inſcription of that famous Medal in *Goltſius*, *Colonia Troas Antigonia Alexandrea*, *Legio viceſima prima*.

When the *Romans* firſt went into *Aſia* againſt *Antiochus*, 'twas but a Κωμόπολις and no great City; but, upon the Peace concluded, the *Romans* much advanced the ſame. *Fimbria*, the rebellious *Roman*, ſpoiled it in the Mithridatick War, boaſting that he had ſubdued *Troy* in eleven days which the Grecians could not take in almoſt as many years. But it was again rebuilt and countenanced by the *Romans*, and became a Roman Colony, with great Immunities conferred on it; and accordingly it is ſo ſet down by *Ptolomy*. For the *Romans*, deriving themſelves from the Trojans, thought no favour too great for it; eſpecially *Julius Cæſar*, who, both in imitation of *Alexander*, and for his own deſcent from *Julus*, of the poſterity of *Æneas*, with much paſſion affected it, and in a diſcontented humour, * was once in mind to tranſlate the *Roman* wealth unto it; ſo that it became a very remarkable place, and was, in *Strabo*'s time, † one of the noble Cities of *Aſia*.

* Sueton.

† Ἐλλογίμων πόλεων

And, if they underſtood the prediction of *Homer* in reference unto the *Romans*, as ſome expound it in *Strabo*, it might much promote their affection unto that place; which being a remarkable prophecy, and ſcarce to be parallel'd in Pagan ſtory, made before *Rome* was built, and concerning the laſting Reign of the progeny of *Æneas*, they could not but take eſpecial notice of it. For thus is *Neptune* made to ſpeak, when he ſaved *Æneas* from the fury of *Achilles*.

Verum agite hunc ſubito præſenti à morte trahamus
Ne Cronides ira flammet ſi fortis Achilles
Hunc mactet, fati quem Lex evadere juſſit.
Ne genus intereat de lato ſemine totum
Dardani ab excelſo præ cunctis prolibus olim,
Dilecti quos è mortali ſtirpe ereavit,
Nunc etiam Priami ſtirpem Saturnius odit,
Trojugenum poſthac Æneas ſceptra tenebit
Et nati natorum & qui naſcentur ab illis.

*Sueton.

The *Roman* favours were alſo continued unto S. *Paul*'s days; for * *Claudius*, producing an ancient Letter of the *Romans* unto King *Seleucus* concerning the Trojan Privileges, made a Releaſe of their Tributes; and *Nero* elegantly pleaded for their Immunities, and remitted all Tributes unto them.

Tacit. *l.* 13.

And, therefore, there being ſo remarkable a City in this Territory, it may ſeem too hard to loſe the ſame in the general name of the Country; and ſince it was ſo eminently favoured by Emperours, enjoying ſo many Immunities, and full of *Roman* Privileges, it was probably very populous, and a fit abode for S. *Paul*, who being a *Roman* Citizen, might live more quietly himſelf, and have no ſmall number of faithfull well-wiſhers in it.

Yet muſt we not conceive that this was the old *Troy*, or re-built in the ſame place with it: for *Troas* was placed about thirty Furlongs Weſt, and upon the ſea ſhore; ſo that, to hold a clearer apprehenſion hereof than is commonly delivered in the Diſcourſes of the Ruines of *Troy*, we may conſider

consider one Inland *Troy*, or old *Ilium*, which was built farther within the Land, and so was removed from the Port where the Grecian Fleet lay in *Homer*; and another Maritime *Troy*, which was upon the Sea Coast placed in the Maps of *Ptolomy*, between *Lectum* and *Sigæum* or Port *Janizam*, Southwest from the old City, which was this of S. *Paul*, and whereunto are appliable the particular accounts of *Bellonius*, when, not an hundred years ago, he described the Ruines of *Troy* with their Baths, Aqueducts, Walls and Towers, to be seen from the sea as he sailed between it and *Tenedos*; and where, upon nearer view, he observed some signs and impressions of his conversion in the ruines of Churches, Crosses, and Inscriptions upon Stones.

Nor was this only a famous City in the days of S. *Paul*, but considerable long after. For, upon the Letter of *Adrianus*, *Herodes Atticus*, at a great charge, repaired their Baths, contrived Aqueducts and noble Water-courses, in it. As is also collectible from the Medals of *Caracalla*, of *Severus*, and *Crispina*; with Inscriptions, *Colonia Alexandria Troas*; bearing on the Reverse either an Horse, a Temple, or a Woman; denoting their destruction by an Horse, their prayers for the Emperour's safety, and, as some conjecture, the memory of *Sibylla*, *Phrygia*, or *Hellespontica*. Philostrat. *in Vita* Herodis Attici.

Nor wanted this City the favour of Christian Princes, but was made a Bishop's See under the Archbishop of *Cyzicum*; but in succeeding discords was destroyed and ruined, and the nobler Stones translated to *Constantinople* by the Turks to beautifie their Mosques and other Buildings.

Concerning the Dead Sea, accept of these few Remarks.

IN the Map of the Dead Sea we meet with the Figure of the Cities which were destroyed: of *Sodom*, *Gommorrha*, *Admah* and *Zeboim*; but with no uniformity; men placing them variously, and from the uncertainty of their situation, taking a fair liberty to set them where they please.

For *Admah*, *Zeboim* and *Gomorrha*, there is no light from the Text to define their situation. But, that *Sodom* could not be far from *Segor* which was seated under the Mountains near the side of the Lake, seems inferrible from the sudden arrival of *Lot*, who, coming from *Sodom* at day break, attained to *Segor* at Sun rising; and therefore *Sodom* is to be placed not many miles from it, not in the middle of the Lake, which against that place is about eighteen miles over, and so will leave nine miles to be gone in so small a space of time.

The Valley being large, the Lake now in length about seventy English miles, the River *Jordan* and divers others running over the Plain, 'tis probable the best Cities were seated upon those Streams: but how the *Jordan* passed or winded, or where it took in the other Streams, is a point too old for Geography to determine.

For, that the River gave the fruitfulness unto this Valley by over watering that low Region, seems plain from that expression in the * Text, that it was watered, *sicut Paradisus & Ægyptus*, like *Eden* and the Plains of *Mesopotamia*, where *Euphrates* yearly overfloweth; or like *Ægypt* where *Nilus* doth the like; and seems probable also from the same course of the River not far above this Valley where the Israelites passed *Jordan*, where 'tis said that *Jordan overfloweth its Banks in the time of Harvest*. * Gen. 13. 10.

That it must have had some passage under ground in the compass of this Valley before the creation of this Lake, seems necessary from the great current of *Jordan*, and from the Rivers *Arnon*, *Cedron*, *Zaeth*, which empty into this Valley; but where to place that concurrence of Waters or place of its absorbition, there is no authentick decision.

The probablest place may be set somewhat Southward, below the Rivers that run into it on the East or Western Shore: and somewhat agreeable unto the account which *Brocardus* received from the Saracens which lived near

near it, *Jordanem ingredi Mare Mortuum & rursum egredi, sed post exiguum intervallum à Terra absorberi.*

Strabo speaks naturally of this Lake, that it was first caused by Earthquakes, by sulphureous and bituminous eruptions, arising from the Earth. But the Scripture makes it plain to have been from a miraculous hand, and by a remarkable expression, *pluit Dominus ignem & Sulphur à Domino.* See also *Deut.* 29. *in ardore Salis*: burning the Cities and destroying all things about the Plain, destroying the vegetable nature of Plants and all living things, salting and making barren the whole Soil, and, by these fiery Showers, kindling and setting loose the body of the bituminous Mines, which shewed their lower Veins before but in some few Pits and openings, swallowing up the Foundation of their Cities; opening the bituminous Treasures below, and making a smoak like a Furnace able to be discerned by *Abraham* at a good distance from it.

If this little may give you satisfaction, I shall be glad, as being, Sir,

Yours, &c.

TRACT

TRACT XI.

OF THE ANSWERS OF THE Oracle of *APOLLO* at *DELPHOS* TO *CROESUS* King of *LYDIA*.

SIR,

AMong the * Oracles of *Apollo* there are none more celebrated than those which he delivered unto *Crœsus* King of † *Lydia*, who seems of all Princes to have held the greatest dependence on them. But most considerable are his plain and intelligible replies which he made unto the same King when he sent his Chains of Captivity unto *Delphos*, after his overthrow by *Cyrus*, with sad expostulations why he encouraged him unto that fatal War by his Oracle, saying * Προλέγουσαι Κροίσῳ, ἢν στρατεύηται ἐπὶ Πέρσας, μεγάλην Ἀρχὴν μιν καταλύσειν, Crœsus, *if he Wars against the Persians, shall dissolve a great Empire.* Why, at least, he prevented not that sad infelicity of his devoted and bountifull Servant, and whether it were fair or honourable for the Gods of *Greece* to be ingrateful: which being a plain and open delivery of *Delphos*, and scarce to be parallell'd in any ancient story, it may well deserve your farther consideration.

* *See* Vulg. Err. *l.* 7. *c.* 12.

† Herod. *l.* 1. 46, 47, &c. 90, 91.

* Herod. *ibid.* 54.

1. His first reply was, *That* Crœsus *suffered not for himself*; but paid the transgression of his fifth predecessour, who kill'd his Master, and usurp'd the dignity unto which he held no title.

Now whether *Crœsus* suffered upon this account or not, hereby he plainly betrayed his insufficiency to protect him; and also obliquely discovered he had a knowledge of his misfortune: for knowing that wicked act lay yet unpunished, he might well divine some of his successours might smart for it: and also understanding he was like to be the last of that race, he might justly fear and conclude this infelicity upon him.

Hereby he also acknowledged the inevitable justice of God; that though Revenge lay dormant, it would not always sleep; and consequently confessed the just hand of God punishing unto the third and fourth generation, nor suffering such iniquities to pass for ever unrevenged.

Hereby

Hereby he flatteringly encouraged him in the opinion of his own merits, and that he only ſuffered for other mens tranſgreſſions: mean while he concealed *Cræſus* his pride, elation of mind and ſecure conceit of his own unparallel'd felicity, together with the vanity, pride and height of luxury of the Lydian Nation, which the Spirit of *Delphos* knew well to be ripe and ready for deſtruction.

2. A ſecond excuſe was, *That it is not in the power of God to hinder the Decree of Fate.* A general evaſion for any falſified prediction founded upon the common opinion of Fate, which impiouſly ſubjecteth the power of Heaven unto it; widely diſcovering the folly of ſuch as repair unto him concerning future events: which, according unto this rule, muſt go on as the Fates have ordered, beyond his power to prevent or theirs to avoid; and conſequently teaching that his Oracles had onely this uſe to render Men more miſerable by foreknowing their misfortunes; whereof *Cræſus* himſelf had ſenſible experience in that Dæmoniacal Dream concerning his eldeſt Son, *That he ſhould be killed by a Spear*, which, after all care and caution, he found inevitably to befall him.

3. In his Third Apology he aſſured him that he endeavoured to transfer the evil Fate and to paſs it upon his Children; and did however procraſtinate his infelicity, and deferred the deſtruction of *Sardis* and his own Captivity three years longer than was fatally decreed upon it.

Wherein while he wipes off the ſtain of Ingratitude, he leaves no ſmall doubt whether, it being out of his power to contradict or transfer the Fates of his Servants, it be not alſo beyond it to defer ſuch ſignal events, and whereon the Fates of whole Nations do depend.

As alſo, whether he intended or endeavoured to bring to paſs what he pretended, ſome queſtion might be made. For that he ſhould attempt or think he could tranſlate his infelicity upon his Sons, it could not conſiſt with his judgment, which attempts not impoſſibles or things beyond his power; nor with his knowledge of future things, and the Fates of ſucceeding Generations: for he underſtood that Monarchy was to expire in himſelf, and could particularly foretell the infelicity of his Sons, and hath alſo made remote predictions unto others concerning the fortunes of many ſucceeding deſcents; as appears in that anſwer unto *Attalus*,

Be of good courage, Attalus, *thou ſhalt reign*
And thy Sons Sons, but not their Sons again.

As alſo unto *Cypſelus* King of *Corinth.*

Happy is the Man who at my Altar ſtands,
Great Cypſelus *who* Corinth *now commands.*
Happy is he, his Sons ſhall happy be,
But for their Sons unhappy days they'll ſee.

Now, being able to have ſo large a proſpect of future things, and of the fate of many Generations, it might well be granted he was not ignorant of the Fate of *Cræſus* his Sons, and well underſtood it was in vain to think to tranſlate his miſery upon them.

4. In the Fourth part of his reply, he clears himſelf of Ingratitude which Hell it ſelf cannot hear of; alledging that he had ſaved his life when he was ready to be burnt, by ſending a mighty Showre, in a fair and cloudleſs day to quench the Fire already kindled, which all the Servants of *Cyrus* could not do. Though this Showre might well be granted, as much concerning his honour, and not beyond his power; yet whether this mercifull Showre fell not out contingently, or were not contrived by an higher power, which hath often pity upon Pagans, and rewardeth their vertues ſometimes with extraordinary temporal favours; alſo, in no unlike caſe, who was the authour of thoſe few fair minutes, which, in a ſhowry day, gave onely time enough for the burning of *Sylla*'s Body, ſome queſtion might be made.

5. The

5. The last excuse devolveth the errour and miscarriage of the business upon *Crœsus*, and that he deceived himself by an inconsiderate misconstruction of his Oracle, that if he had doubted, he should not have passed it over in silence, but consulted again for an exposition of it. Besides, he had neither discussed, nor well perpended his Oracle concerning *Cyrus*, whereby he might have understood not to engage against him.

Wherein, to speak indifferently, the deception and miscarriage seems chiefly to lie at *Crœsus* his door, who, if not infatuated with confidence and security, might justly have doubted the construction: besides, he had received two Oracles before, which clearly hinted an unhappy time unto hi m:the first concerning *Cyrus*.

When ever a Mule shall o'er the Medians reign,
Stay not, but unto Hermus *fly amain.*

Herein though he understood not the *Median Mule* of *Cyrus*, that is, of his mixed descent, and from Assyrian and Median Parents, yet he could not but apprehend some misfortune from that quarter.

Though this prediction seemed a notable piece of Divination, yet did it not so highly magnifie his natural sagacity or knowledge of future events as was by many esteemed; he having no small assistance herein from the Prophecy of *Daniel* concerning the Persian Monarchy, and the Prophecy of *Jeremiah* and *Isaiah*, wherein he might read the name of *Cyrus* who should restore the Captivity of the Jews, and must, therefore, be the great Monarch and Lord of all those Nations.

The same misfortune was also foretold when he demanded of *Apollo* if ever he should hear his dumb Son speak.

O foolish Crœsus *who hast made this choice,*
To know when thou shalt hear thy dumb Son's voice;
Better he still were mute, would nothing say,
When he first speaks, look for a dismal day.

This, if he contrived not the time and the means of his recovery, was no ordinary divination: yet how to make out the verity of the story some doubt may yet remain. For though the causes of deafness and dumbness were removed, yet since words are attained by hearing, and men speak not without instruction, how he should be able immediately to utter such apt and significant words, as * Ἄνθρωπε, μὴ κτεῖνε Κροῖσον, *O Man slay not* Crœsus; it cannot escape some doubt, since the Story also delivers, that he was deaf and dumb, that he then first began to speak, and spake all his life after. * Herod. l. 1. 85.

Now, if *Crœsus* had consulted again for a clearer exposition of what was doubtfully delivered, whether the Oracle would have spake out the second time or afforded a clearer answer, some question might be made from the examples of his practice upon the like demands.

So when the Spartans had often fought with ill success against the *Tegeates*, they consulted the Oracle what God they should appease, to become victorious over them. The answer was, *that they should remove the bones of* Orestes. Though the words were plain, yet the thing was obscure, and like finding out the Body of *Moses*. And therefore they once more demanded in what place they should find the same; unto whom he returned this answer,

When in the Tegean Plains a place thou find'st
Where blasts are made by too impetuous Winds,
Where that that strikes is struck, blows follow blows;
There doth the Earth Orestes *Bones enclose.*

Which obscure reply the wisest of *Sparta* could not make out, and was

casually unriddled by one talking with a Smith who had found large Bones of a Man buried about his House; the Oracle importing no more than a Smith's Forge, expressed by a double Bellows, the Hammer and Anvil therein.

Now, why the Oracle should place such consideration upon the Bones of *Orestes* the Son of *Agamemnon*, a mad man and a murtherer, if not to promote the idolatry of the Heathens, and maintain a superstitious veneration of things of no activity, it may leave no small obscurity.

Or why, in a business so clear in his knowledge, he should affect so obscure expressions it may also be wondred; if it were not to maintain the wary and evasive method in his answers: for, speaking obscurely in things beyond doubt within his knowledge, he might be more tolerably dark in matters beyond his prescience.

Though EI were inscribed over the Gate of *Delphos*, yet was there no uniformity in his deliveries. Sometimes with that *obscurity* as argued a fearfull prophecy; sometimes so *plainly* as might confirm a spirit of divinity; sometimes *morally*, deterring from vice and villany; another time *vitiously*, and in the spirit of bloud and cruelty: observably modest in his civil ænigma and periphrasis of that part which old *Numa* would plainly * name, and *Medea* would not understand, when he advised *Ægeus* not to draw out his foot before, untill he arriv'd upon the Athenian ground; whereas another time he seemed too literal in that unseemly epithet unto *Cyanus* King of † *Cyprus*, and put a beastly trouble upon all *Ægypt* to find out the Urine of a true Virgin. Sometimes, more beholding unto memory than invention, he delighted to express himself in the bare Verses of *Homer*. But that he principally affected Poetry, and that the Priest not onely or always composed his prosal raptures into Verse, seems plain from his necromantical Prophecies, whilst the dead Head in *Phlegon* delivers a long Prediction in Verse; and at the raising of the Ghost of *Commodus* unto *Caracalla*, when none of his Ancestours would speak, the divining Spirit versified his infelicities; corresponding herein to the apprehensions of elder times who conceived not onely a Majesty but something of Divinity in Poetry, and as in ancient times the old Theologians delivered their inventions.

* Plut. *in* Thes.

† *V.* Herod.

Some critical Readers might expect in his oraculous Poems a more than ordinary strain and true spirit of *Apollo*; not contented to find that Spirits make Verses like Men, beating upon the filling Epithet, and taking the licence of dialects and lower helps, common to humane Poetry; wherein, since *Scaliger*, who hath spared none of the Greeks, hath thought it wisedom to be silent, we shall make no excursion.

Others may wonder how the curiosity of elder times, having this opportunity of his Answers, omitted Natural Questions; or how the old Magicians discovered no more Philosophy; and if they had the assistance of Spirits, could rest content with the bare assertions of things, without the knowledge of their causes; whereby they had made their Acts iterable by sober hands, and a standing part of Philosophy. Many wise Divines hold a reality in the wonders of the Ægyptian Magicians, and that those *magnalia* which they performed before *Pharaoh* were not mere delusions of Sense. Rightly to understand how they made Serpents out of Rods; Froggs and Bloud of Water, were worth half *Porta*'s Magick.

Hermolaus Barbarus was scarce in his wits, when, upon conference with a Spirit, he would demand no other question than the explication of *Aristotle*'s *Entelecheia*. *Appion* the Grammarian, that would raise the Ghost of *Homer* to decide the Controversie of his Country, made a frivolous and pedantick use of Necromancy. *Philostratus* did as little, that call'd up the Ghost of *Achilles* for a particular of the Story of *Troy*. Smarter curiosities would have been at the great Elixir, the Flux and Reflux of the Sea, with other noble obscurities in Nature; but probably all in vain: in matters cognoscible and framed for our disquisition, our Industry must be our Oracle, and Reason our *Apollo*.

Not

Not to know things without the Arch of our intellectuals, or what Spirits apprehend, is the imperfection of our nature not our knowledge, and rather inscience than ignorance in man. Revelation might render a great part of the Creation easie, which now seems beyond the stretch of humane indagation; and welcome no doubt from good hands might be a true *Almagest*, and great celestial construction: a clear Systeme of the planetical Bodies of the invisible and seeming useless Stars unto us, of the many Suns in the eight Sphere, what they are, what they contain, and to what more immediately those stupendious Bodies are serviceable. But being not hinted in the authentick Revelation of God, nor known how far their discoveries are stinted; if they should come unto us from the mouth of evil Spirits, the belief thereof might be as unsafe as the enquiry.

This is a copious Subject; but having exceeded the bounds of a Letter, I will not, now, pursue it farther. I am

Yours, &c.

TRACT XII.

A

PROPHECY,

Concerning the future ſtate of ſeveral

NATIONS,

In a Letter written upon occaſion of an old Prophecy ſent to the Author from a Friend, with a Requeſt that he would conſider it.

SIR,

I Take no pleaſure in Prophecies ſo hardly intelligible, and pointing at future things from a pretended Spirit of Divination; of which ſort this ſeems to be which came unto your hand, and you were pleaſed to ſend unto me. And therefore, for your eaſier apprehenſion, divertiſement and conſideration, I preſent you with a very different kind of prediction: not poſitively or peremptorily telling you what ſhall come to paſs; yet pointing at things not without all reaſon or probability of their events; not built upon fatal decrees, or inevitable deſignations, but upon conjectural foundations, whereby things wiſhed may be promoted, and ſuch as are feared, may more probably be prevented.

THE

THE PROPHECY.

WHEN New England *shall trouble* New Spain.
When Jamaica *shall be Lady of the Isles and the Main.*
When Spain *shall be in* America *hid,*
And Mexico *shall prove a* Madrid.
When Mahomet's *Ships on the* Baltick *shall ride,*
And Turks shall labour to have Ports on that side.
When Africa *shall no more sell out their Blacks*
To make Slaves and Drudges to the American Tracts.
When Batavia *the Old shall be contemn'd by the New.*
When a new Drove of Tartars shall China *subdue.*
When America *shall cease to send out its Treasure,*
But employ it at home in American Pleasure.
When the new World shall the old invade,
Nor count them their Lords but their fellows in Trade.
When Men shall almost pass to Venice *by Land,*
Not in deep Water but from Sand to Sand.
When Nova Zembla *shall be no stay*
Unto those who pass to or from Cathay.
Then think strange things are come to light.
Whereof but few have had a foresight.

THE

THE EXPOSITION OF THE PROPHECY.

When New England *shall trouble* New Spain.

THAT is, When that thriving Colony, which hath so much encreased in our days, and in the space of about fifty years, that they can, as they report, raise between twenty and thirty thousand Men upon an exigency, shall in process of time be so advanced, as to be able to send forth Ships and Fleets, as to infest the American Spanish Ports and Maritime Dominions by depredations or assaults; for which attempts they are not like to be unprovided, as abounding in the Materials for Shipping, Oak and Firre. And when length of time shall so far encrease that industrious people, that the neighbouring Country will not contain them, they will range still farther and be able, in time, to set forth great Armies, seek for new possessions, or make considerable and conjoyned migrations, according to the custom of swarming Northern Nations; wherein it is not likely that they will move Northward, but toward the Southern and richer Countries, which are either in the Dominions or Frontiers of the Spaniards: and may not improbably erect new Dominions in places not yet thought of, and yet, for some Centuries, beyond their power or Ambition.

When Jamaica *shall be Lady of the Isles and the Main.*

That is, When that advantageous Island shall be well peopled, it may become so strong and potent as to over-power the neighbouring Isles, and also a part of the main Land, especially the Maritime parts. And already in their infancy they have given testimony of their power and courage in their bold attempts upon *Campeche* and *Santa Martha*; and in that notable attempt upon *Panama* on the Western side of *America*: especially considering this Island is sufficiently large to contain a numerous people, of a Northern and warlike descent, addicted to martial affairs both by Sea and Land, and advantageously seated to infest their neighbours both of the Isles and the Continent, and like to be a receptacle for Colonies of the same originals from *Barbadoes* and the neighbour Isles.

When Spain *shall be in* America *hid*;
And Mexico *shall prove a* Madrid.

That is, When *Spain*, either by unexpected disasters, or continued emissions of people into *America*, which have already thinned the Country, shall be farther exhausted at home: or when, in process of time, their Colonies shall grow by many accessions more than their originals, then *Mexico* may become a *Madrid*, and as considerable in people, wealth and splendour: wherein that place is already so well advanced, that accounts scarce credible are given of it. And it is so advantageously seated, that, by *Acapulco* and other Ports on the South Sea, they may maintain a communication and commerce with the Indian Isles and Territories, and with *China* and *Japan*, and

and on this side, by *Porto Belo* and others, hold correspondence with *Europe* and *Africa*.

When Mahomet's *Ships in the Baltick shall ride.*

Of this we cannot be out of all fear; for if the Turk should master *Poland*, he would be soon at this Sea. And from the odd constitution of the Polish Government, the divisions among themselves, jealousies between their Kingdom and Republick; vicinity of the Tartars; treachery of the Cossacks, and the method of Turkish Policy, to be at Peace with the Emperour of *Germany* when he is at War with the Poles, there may be cause to fear that this may come to pass. And then he would soon endeavour to have Ports upon that Sea, as not wanting Materials for Shipping. And, having a new acquist of stout and warlike men, may be a terrour unto the confiners on that Sea, and to Nations which now conceive themselves safe from such an Enemy.

When Africa *shall no more sell out their Blacks.*

That is, When African Countries shall no longer make it a common Trade to sell away their people to serve in the drudgery of American Plantations. And that may come to pass when ever they shall be well civilized, and acquainted with Arts and Affairs sufficient to employ people in their Countries: if also they should be converted to Christianity, but especially unto Mahometism; for then they would never sell those of their Religion to be Slaves unto Christians.

When Batavia *the Old shall be contemn'd by the New.*

When the Plantations of the Hollander at *Batavia* in the *East Indies*, and other places in the *East Indies*, shall, by their conquests and advancements, become so powerfull in the Indian Territories; Then their Original Countries and States of *Holland* are like to be contemned by them, and obeyed only as they please. And they seem to be in a way unto it at present by their several Plantations, new acquists and enlargements: and they have lately discovered a part of the Southern Continent, and several places which may be serviceable unto them, when ever time shall enlarge them unto such necessities.

And a new Drove of Tartars shall China *subdue.*

Which is no strange thing if we consult the Histories of *China*, and successive Inundations made by Tartarian Nations. For when the Invaders in process of time, have degenerated into the effeminacy and softness of the Chineses, then they themselves have suffered a new Tartarian Conquest and Inundation. And this hath hapened from time beyond our Histories: for, according to their account, the famous Wall of *China*, built against the irruptions of the Tartars, was begun above a hundred years before the Incarnation.

When America *shall cease to send forth its Treasure,*
But employ it at home for American Pleasure.

That is, When *America shall* be better civilized, new policied and divided between great Princes, it may come to pass that they will no longer suffer their Treasure of Gold and Silver to be sent out to maintain the Luxury of *Europe* and other parts: but rather employ it to their own advantages, in great Exploits and Undertakings, magnificent Structures, Wars, or Expeditions of their own.

When

When the new World ſhall the old invade.

That is, When *America* ſhall be ſo well peopled, civilized and divided into Kingdoms, they are like to have ſo little regard of their Originals, as to acknowledge no ſubjection unto them: they may alſo have a diſtinct commerce between themſelves, or but independently with thoſe of *Europe*, and may hoſtilely and pyratically aſſault them, even as the Greek and Roman Colonies after a long time dealt with their Original Countries.

When Men ſhall almoſt paſs to Venice *by Land,*
Not in deep Waters but from Sand to Sand.

That is, When, in long proceſs of time, the Silt and Sands ſhall ſo choak and ſhallow the Sea in and about it. And this hath conſiderably come to paſs within theſe fourſcore years: and is like to encreaſe from ſeveral cauſes, eſpecially by the turning of the River *Brenta*, as the learned *Caſtelli* hath declared.

When Nova Zembla *ſhall be no ſtay*
Unto thoſe who paſs to or from Cathay.

That is, When ever that often ſought for North-Eaſt paſſage unto *China* and *Japan* ſhall be diſcovered; the hindrance whereof was imputed to *Nova Zembla*; for this was conceived to be an excurſion of Land ſhooting out directly, and ſo far Northward into the Sea that it diſcouraged from all Navigation about it. And therefore Adventurers took in at the Southern part at a ſtrait by *Waygatz* next the Tartarian Shore: and, ſailing forward they found that Sea frozen and full of Ice, and ſo gave over the attempt. But of late years, by the diligent enquiry of ſome Moſcovites, a better diſcovery is made of theſe parts, and a Map or Chart made of them. Thereby *Nova Zembla* is found to be no Iſland extending very far Northward, but, winding Eaſtward, it joineth to the Tartarian Continent, and ſo makes a *Peninſula*: and the Sea between it which they entred at *Waygatz*, is found to be but a large Bay, apt to be frozen by reaſon of the great River of *Oby*, and other freſh Waters, entring into it: whereas the main Sea doth not freez upon the North of *Zembla* except near unto Shores; ſo that if the Moſcovites were skilfull Navigatours, they might, with leſs difficulties, diſcover this paſſage unto *China*; but however the Engliſh, Dutch and Danes are now like to attempt it again.

But this is Conjecture, and not Prophecy: and ſo (I know) you will take it. I am,

Sir, &c.

TRACT

TRACT XIII.

MUSÆUM CLAUSUM,

OR,

Bibliotheca Abſcondita:

Containing

Some remarkable Books, Antiquities, Pictures and Rarities of ſeveral kinds, ſcarce or never ſeen by any Man now living.

SIR,

WITH many thanks I return that noble Catalogue of Books, Rarities and Singularities of Art and Nature, which you were pleaſed to communicate unto me. There are many Collections of this kind in *Europe*. And, beſides the printed accounts of the *Muſæum Aldrovandi*, *Calceolarianum Moſcardi*, *Wormianum*; the *Caſa Abbellita* at *Loretto*, and *Threaſor* of S. *Dennis*, the *Repoſitory* of the Duke of *Tuſcany*, that of the Duke of *Saxony*, and that noble one of the Emperour at *Vienna*, and many more are of ſingular note. Of what in this kind I have by me I ſhall make no repetition, and you having already had a view thereof, I am bold to preſent you with the Liſt of a Collection, which I may juſtly ſay you have not ſeen before.

The Title is, as above,

Muſæum Clauſum, or *Bibliotheca Abſcondita: containing ſome remarkable Books, Antiquities, Pictures and Rarities of ſeveral kinds, ſcarce or never ſeen by any Man now living.*

1. *Rare and generally unknown Books.*

1. A Poem of *Ovidius Naſo*, written in the Getick Language, * during his exile at *Tomos* found wrapt up in Wax at *Sabaria*, on the Frontiers of *Hungary*, where there remains a tradition that he died, in his return towards *Rome* from *Tomos*, either after his pardon, or the death of *Auguſtus*.

* *Ab pudet & ſcripſi Getico ſermone Libellum.*

2. The Letter of *Quintus Cicero*, which he wrote in answer to that of his Brother *Marcus Tullius*, desiring of him an account of *Britany*, wherein are described the Country, State and Manners of the *Britains* of that Age.

3. An Ancient British Herbal, or description of divers Plants of this Island, observed by that famous Physician *Scribonius Largus*, when he attended the Emperour *Claudius* in his Expedition into *Britany*.

4. An exact account of the Life and Death of *Avicenna* confirming the account of his Death by taking nine Clysters together in a fit of the Colick; and not as *Marius* the Italian Poet delivereth, by being broken upon the Wheel; left with other Pieces by *Benjamin Tudelensis*, as he travelled from *Saragossa* to *Jerusalem*, in the hands of *Abraham Jarchi*, a famous Rabbi of *Lunet* near *Montpelier*, and found in a Vault when the Walls of that City were demolished by *Lewis* the Thirteenth.

5. A punctual relation of *Hannibal*'s march out of *Spain* into *Italy*, and far more particular than that of *Livy*, where about he passed the River *Rhodanus* or *Rhosne*; at what place he crossed the *Isura* or *L'isere*; when he marched up towards the confluence of the *Sone* and the *Rhone*, or the place where the City *Lyons* was afterward built; how wisely he decided the difference between King *Brancus* and his Brother, at what place he passed the *Alpes*, what Vinegar he used, and where he obtained such quantity to break and calcine the Rocks made hot with Fire.

6. A learned Comment upon the *Periplus* of *Hanno* the Carthaginian, or his Navigation upon the Western Coast of *Africa*, with the several places he landed at; what Colonies he settled, what Ships were scattered from his Fleet near the Æquinoctial Line, which were not afterward heard of, and which probably fell into the Trade Winds, and were carried over into the Coast of *America*.

7. A particular Narration of that famous Expedition of the English into *Barbary* in the ninety fourth year of the *Hegira*, so shortly touched by *Leo Africanus*, whither called by the Goths they besieged, took and burnt the City of *Arzilla* possessed by the Mahometans, and lately the seat of *Gayland*; with many other exploits delivered at large in Arabick, lost in the Ship of Books and Rarities which the King of *Spain* took from *Syddy Hamet* King of *Fez*, whereof a great part were carried into the *Escurial*, and conceived to be gathered out of the relations of *Hibnu Nachu*, the best Historian of the African Affairs.

8. A Fragment of *Pythæas* that ancient Traveller of *Marseille*; which we suspect not to be spurious, because, in the description of the Northern Countries, we find that passage of *Pythæas* mentioned by *Strabo*, that all the Air beyond *Thule* is thick, condensed and gellied, looking just like Sea Lungs.

9. A *Sub Marine* Herbal, describing the several Vegetables found on the Rocks, Hills, Valleys, Meadows at the bottom of the Sea, with many sorts of *Alga*, *Fucus*, *Quercus*, *Polygonum*, *Gramens* and others not yet described.

10. Some Manuscripts and Rarities brought from the Libraries of *Æthiopia*, by *Zaga Zaba*, and afterward transported to *Rome*, and scattered by the Souldiers of the Duke of *Bourbon*, when they barbarously sacked that City.

11. Some Pieces of *Julius Scaliger*, which he complains to have been stoln from him, sold to the Bishop of *Mende* in *Languedock*, and afterward taken away and sold in the Civil Wars under the Duke of *Rohan*.

12. A Comment of *Dioscorides* upon *Hippocrates*, procured from *Constantinople* by *Amatus Lusitanus*, and left in the hands of a Jew of *Ragusa*.

13. *Marcus Tullius Cicero* his Geography; as also a part of that magnified Piece of his *De Republica*, very little answering the great expectation of it, and short of Pieces under the same name by *Bodinus* and *Tholosanus*.

14. King *Mithridates* his *Oneirocritica*.

Aristotle *de Precationibus*.

Democritus *de his quæ fiunt apud Orcum, & Oceani circumnavigatio*.

Epicurus

Epicurus *de Pietate.*

A Tragedy of *Thyeſtes*, and another of *Medea*, writ by *Diogenes* the Cynick.

King *Alfred* upon *Ariſtotle de Plantis.*

Seneca's Epiſtles to S. *Paul.*

King *Solomon de Umbris Idearum*, which *Chicus Aſculanus*, in his Comment upon *Johannes de Sacroboſco*, would make us believe he ſaw in the Library of the Duke of *Bavaria.*

15. Artemidori *Oneirocritici Geographia.*

Pythagoras *de Mari Rubro.*

The Works of *Confutius* the famous Philoſopher of *China*, tranſlated into Spaniſh.

16. *Joſephus* in Hebrew, written by himſelf.

17. The Commentaries of *Sylla* the Dictatour.

18. A Commentary of *Galen* upon the Plague of *Athens* deſcribed by *Thucydides.*

19. *Duo Cæſaris Anti-Catones*, or the two notable Books writ by *Julius Cæſar* againſt *Cato*; mentioned by *Livy*, *Saluſtius* and *Juvenal*; which the Cardinal of *Liege* told *Ludovicus Vives* were in an old Library of that City.

Mazhapha Einok, or, the Prophecy of *Enoch*, which *Ægidius Lochienſis*, a learned Eaſtern Traveller, told *Peireſchius* that he had found in an old Library at *Alexandria* containing eight thouſand Volumes.

20. A Collection of Hebrew Epiſtles, which paſſed between the two learned Women of our age *Maria Molinea* of *Sedan*, and *Maria Schurman* of *Utrecht.*

A wondrous Collection of ſome Writings of *Ludovica Saracenica*, Daughter of *Philibertus Saracenicus* a Phyſician of *Lyons*, who at eight years of age had made a good progreſs in the Hebrew, Greek and Latin Tongues.

2. *Rarities in Pictures.*

1. A Picture of the three remarkable Steeples or Towers in *Europe* built purpoſely awry and ſo as they ſeem falling. *Torre Piſana* at *Piſa*, *Torre Gariſenda* in *Bononia*, and that other in the City of *Colein.*

2. A Draught of all ſorts of Siſtrums, Crotaloes, Cymbals, Tympans, *&c.* in uſe among the Ancients.

3. Large *Submarine* Pieces, well delineating the bottom of the Mediterranean Sea, the Prerie or large Sea-meadow upon the Coaſt of *Provence*, the Coral Fiſhing, the gathering of Sponges, the Mountains, Valleys and Deſarts, the Subterraneous Vents and Paſſages at the bottom of that Sea. Together with a lively Draught of *Cola Peſce*, or the famous Sicilian Swimmer, diving into the *Voragos* and broken Rocks by *Charybdis*, to fetch up the golden Cup, which *Frederick*, King of *Sicily*, had purpoſely thrown into that Sea.

4. A Moon Piece, deſcribing that notable Battel between *Axalla*, General of *Tamerlane*, and *Camares* the Perſian, fought by the light of the Moon.

5. Another remarkable Fight of *Inghimmi* the Florentine with the Turkiſh Galleys by Moon-light, who being for three hours grappled with the *Baſha* Galley, concluded with a ſignal Victory.

6. A delineation of the great Fair of *Almachara* in *Arabia*, which, to avoid the great heat of the Sun, is kept in the Night, and by the light of the Moon.

7. A Snow Piece, of Land and Trees covered with Snow and Ice, and Mountains of Ice floating in the Sea, with Bears, Seals, Foxes, and variety of rare Fowls upon them.

8. An Ice Piece deſcribing the notable Battel between the Jaziges and the Romans, fought upon the frozen *Danubius*, the Romans ſettling one foot upon their Targets to hinder them from ſlipping, their fighting with the Jaziges when they were fallen, and their advantages therein by their art in volutation and rolling contention or wraſtling, according to the deſcription of *Dion*.

9. *Socia*, or a Draught of three perſons notably reſembling each other. Of King *Henry* the Fourth of *France*, and a Miller of *Languedock*; of *Sforza* Duke of *Milain* and a Souldier; of *Malaleſta* Duke of *Rimini* and *Marchiſinus* the Jeſter.

10. A Picture of the great Fire which happened at *Conſtantinople* in the Reign of *Sultan Achmet*. The Janizaries in the mean time plundring the beſt Houſes, *Naſſa Baſſa* the Vizier riding about with a Cimetre in one hand and a Janizary's Head in the other to deter them; and the Prieſts attempting to quench the Fire, by pieces of *Mahomet*'s Shirt dipped in holy Water and thrown into it.

11. A Night Piece of the diſmal Supper and ſtrange Entertain of the Senatours by *Domitian*, according to the deſcription of *Dion*.

12. A Veſtal Sinner in the Cave with a Table and a Candle.

13. An Elephant dancing upon the Ropes with a *Negro* Dwarf upon his Back.

14. Another deſcribing the mighty Stone falling from the Clouds into *Ægoſpotamos* or the Goats River in *Greece*, which Antiquity could believe that *Anaxagoras* was able to foretell half a year before.

15. Three noble Pieces; of *Vercingetorix* the Gaul ſubmitting his perſon unto *Julius Cæſar*; of *Tigranes* King of *Armenia* humbly preſenting himſelf unto *Pompey*; and of *Tamerlane* aſcending his Horſe from the Neck of *Bajazet*.

16. Draughts of three paſſionate Looks; of *Thyeſtes* when he was told at the Table that he had eaten a piece of his own Son; of *Bajazet* when he went into the Iron Cage; of *Oedipus* when he firſt came to know that he had killed his Father, and married his own Mother.

17. Of the Cymbrian Mother in *Plutarch*, who, after the overthrow by *Marius* hanged her ſelf and her two Children at her feet.

18. Some Pieces delineating ſingular inhumanities in Tortures. The *Scaphiſmus* of the Perſians. The living truncation of the Turks. The hanging Sport at the Feaſt of the Thracians. The exact method of fleying Men alive, beginning between the Shoulders, according to the deſcription of *Thomas Minadoi*, in his Perſian War. Together with the ſtudied tortures of the French Traitours at *Pappa* in *Hungaria*: as alſo the wild and enormous torment invented by *Tiberius*, deſigned according unto the deſcription of *Suetonius*. *Excogitaverunt inter genera cruciatus, ut largâ meri potione per fallaciam oneratos repente veretris deligatis fidicularum ſimul urinæque tormento diſtenderet.*

19. A Picture deſcribing how *Hannibal* forced his paſſage over the River *Rhoſne* with his Elephants, Baggage and mixed Army; with the Army of the Gauls oppoſing him on the contrary Shore, and *Hanno* paſſing over with his Horſe much above to fall upon the Rere of the Gauls.

20. A neat Piece deſcribing the Sack of *Fundi* by the Fleet and Soldiers of *Barbaroſſa* the Turkiſh Admiral, the confuſion of the people and their flying up to the Mountains, and *Julia Gonzaga* the beauty of *Italy* flying away with her Ladies half naked on Horſeback over the Hills.

21. A noble Head of *Franciſcus Gonzaga*, who being impriſoned for Treaſon, grew grey in one night, with this Inſcription,

O nox quam longa eſt quæ facit una ſenem.

22. A large Picture deſcribing the Siege of *Vienna* by *Solyman* the Magnificent, and at the ſame time the Siege of *Florence* by the Emperour *Charles* the Fifth and Pope *Clement* the Seventh, with this Subſcription,

Tum

Tum vacui capitis populum Phæaca *putares?*

23. An exquiſite Piece properly delineating the firſt courſe of *Metellus* his Pontificial Supper, according to the deſcription of *Macrobius*; together with a Diſh of *Piſces Foſſiles*, garniſhed about with the little Eels taken out of the backs of Cods and Perches; as alſo with the Shell Fiſhes found in Stones about *Ancona*.

24. A Picture of the noble Entertain and Feaſt of the Duke of *Chauſue* at the Treaty of *Collen*, 1673. when in a very large Room, with all the Windows open, and at a very large Table he ſate himſelf, with many great perſons and Ladies; next about the Table ſtood a row of Waiters, then a row of Muſicians, then a row of Musketiers.

25. *Miltiades*, who overthrew the Perſians at the Battel of *Marathon*, and delivered *Greece*, looking out of a Priſon Grate in *Athens*, wherein he died, with this Inſcription,

Non hoc terribiles Cymbri non Britones unquam,
Sauromataeve truces aut immanes Agathyrſi.

26. A fair Engliſh Lady drawn *Al Negro*, or in the Æthiopian hue excelling the original White and Red Beauty, with this Subſcription,

Sed quandam volo nocte Nigriorem.

27. Pieces and Draughts in *Caricatura*, of Princes, Cardinals and famous Men; wherein, among others, the Painter hath ſingularly hit the ſignatures of a Lion and a Fox in the face of Pope *Leo* the Tenth.

28. Some Pieces *A la ventura*, or Rare Chance Pieces, either drawn at random, and happening to be like ſome perſon, or drawn for ſome, and happening to be more like another; while the Face, miſtaken by the Painter; proves a tolerable Picture of one he never ſaw.

29. A Draught of famous Dwarfs with this Inſcription,

Nos facimus Bruti puerum nos Lagona vivum.

30. An exact and proper delineation of all ſorts of Dogs upon occaſion of the practice of *Sultan Achmet*; who in a great Plague at *Conſtantinople* tranſported all the Dogs therein unto *Pera*, and from thence into a little Iſland, where they periſhed at laſt by Famine: as alſo the manner of the Prieſts curing of mad Dogs by burning them in the forehead with Saint *Bellin's Key*.

31. A noble Picture of *Thoriſmund* King of the Goths as he was killed in his Palace at *Tholouze*, who being let bloud by a Surgeon, while he was bleeding, a ſtander by took the advantage to ſtab him.

32. A Picture of rare Fruits with this Inſcription,

Credere quæ poſſis ſurrepta ſororibus Afris.

33. An handſome Piece of Deformity expreſſed in a notable hard Face, with this Inſcription,

——*Ora*
Julius in Satyris qualia Rufus habet.

34. A noble Picture of the famous Duel between *Paul Maneſſi* and *Caraguſa* the Turk in the time of *Amurath* the Second; the Turkiſh Army and that of *Scanderbeg* looking on; wherein *Maneſſi* ſlew the Turk, cut off his Head, and carried away the Spoils of his Body.

3. *Antiquities and Rarities of ſeveral ſorts.*

1. CErtain ancient Medals with Greek and Roman Inſcriptions, found about *Crim Tartary*; conceived to be left in thoſe parts by the Souldiers of *Mithridates*, when overcome by *Pompey*, he marched round about the North of the *Euxine* to come about into *Thracia*.

2. Some ancient Ivory and Copper Croſſes found with many others in *China*; conceived to have been brought and left there by the Greek Souldiers who ſerved under *Tamerlane* in his Expedition and Conqueſt of that Country.

3. Stones of ſtrange and illegible Inſcriptions, found about the great ruines which *Vincent le Blanc* deſcribeth about *Cephala* in *Africa*, where he opinion'd that the Hebrews raiſed ſome Buildings of old, and that *Solomon* brought from thereabout a good part of his Gold.

4. Some handſome Engraveries and Medals, of *Juſtinus* and *Juſtinianus*, found in the cuſtody of a Bannyan in the remote parts of *India*, conjectured to have been left there by the Friers mentioned in *Procopius*, who travelled thoſe parts in the Reign of *Juſtinianus*, and brought back into *Europe* the diſcovery of Silk and Silk Worms.

5. An original Medal of *Petrus Aretinus*, who was called *Flagellum Principum*, wherein he made his own Figure on the Obverſe part with this Inſcription,

Il Divino Aretino.

On the Reverſe ſitting on a Throne, and at his Feet Ambaſſadours of Kings and Princes bringing Preſents unto him, with this Inſcription,

I Principi tributati dai Popoli tributano il Servitor loro.

6. *Mummia Tholoſana*; or, The complete Head and Body of Father *Criſpin*, buried long ago in the Vault of the Cordeliers at *Tholouſe*, where the Skins of the dead ſo drie and parch up without corrupting that their perſons may be known very long after, with this Inſcription,

Ecce iterum Criſpinus.

7. A noble *Quandros* or Stone taken out of a Vulture's Head.

8. A large *Oſtridge*'s Egg, whereon is neatly and fully wrought that famous Battle of *Alcazar*, in which three Kings loſt their lives.

9. An *Etiudros Alberti* or Stone that is apt to be always moiſt: uſefull unto drie tempers, and to be held in the hand in Fevers inſtead of Cryſtal, Eggs, Limons, Cucumbers.

10. A ſmall Viol of Water taken out of the Stones therefore called *Enhydri*, which naturally include a little Water in them, in like manner as the *Ætites* or *Aëgle* Stone doth another Stone.

11. A neat painted and gilded Cup made out of the *Confiti di Tivoli* and formed up with powder'd Egg-ſhells; as *Nero* is conceived to have made his *Piſcina admirabilis*, ſingular againſt Fluxes to drink often therein.

12. The Skin of a Snake bred out of the Spinal Marrow of a Man.

13. Vegetable Horns mentioned by *Linſchoten*, which ſet in the ground grow up like Plants about *Goa*.

14. An extract of the Ink of Cuttle Fiſhes reviving the old remedy of *Hippocrates* in Hyſterical Paſſions.

15. Spirits and Salt of *Sargaſſo* made in the Weſtern Ocean covered with that Vegetable; excellent againſt the Scurvy.

16. An extract of *Cachundè* or *Liberans* that famous and highly magnified Compoſition in the *Eaſt Indies* againſt Melancholy.

17. *Diarhizon*

17. *Diarrhizon mirificum*; or an unparallel'd Compoſition of the moſt effectual and wonderfull Roots in Nature.

℞ *Rad. Butuæ Cuamenſis.*
Rad. Moniche Cuamenſis.
Rad. Mongus Bazainenſis.
Rad. Caſei Baizanenſis
Rad. Columbæ Mozambiguenſis,
Gim Sem Sinicæ.
Fo Lim lac Tigridis dictæ.
Fo ſeu
Cort. Rad. Soldæ.
Rad. Ligni Solorani.
Rad. Malacenſis madrededios dictæ an. ℥ij.

M. fiat pulvis, qui cum gelatinâ Cornu Cervi Moſchati Chinenſis formetur in maſſas oviformes.

18. A tranſcendent Perfume made of the richeſt Odorates of both the *Indies*, kept in a Book made of the Muſchie Stone of *Niarienburg*, with this Inſcription,

——*Deos rogato,*
Totum ut te faciant, Fabulle, Naſum.

19. A *Clepſelæa*, or Oil Hour-glaſs, as the Ancients uſed thoſe of Water.

20. A Ring found in a Fiſhes Belly taken about *Gorro*; conceived to be the ſame wherewith the Duke of *Venice* had wedded the Sea.

21. A neat Crucifix made out of the croſs Bone of a Frogs Head.

22. A large Agath containing a various and careleſs Figure, which looked upon by a Cylinder repreſenteth a perfect Centaur. By ſome ſuch advantages King *Pyrrhus* might find out *Apollo* and the nine Muſes in thoſe Agaths of his whereof *Pliny* maketh mention.

23. *Batrachomyomachia*, or the Homerican Battel between Frogs and Mice, neatly deſcribed upon the Chizel Bone of a large Pike's Jaw.

24. *Pyxis Pandoræ*, or a Box which held the *Unguentum Peſtiferum*, which by anointing the Garments of ſeveral perſons begat the great and horrible Plague of *Milan*.

25. A Glaſs of Spirits made of Æthereal Salt, Hermetically ſealed up, kept continually in Quick-ſilver; of ſo volatile a nature that it will ſcarce endure the Light, and therefore only to be ſhown in Winter, or by the light of a Carbuncle, or Bononian Stone.

He who knows where all this Treaſure now is, is a great *Apollo*. I'm ſure I am not He. However, I am,

Sir, Yours, &c.

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